June 1986 No. 51

98p

sinclair user

BRITAIN'S B… MAGAZINE



Scoop! Amstrad's SUPER SPECTRUM

— a £200 Amiga?

Alien Highway

Toolkit survey

Kirel

Elf and happiness

Win Gargoyle's latest — it's Magick! + Graphic Adventure Creator previewed + DIY Adventure Builder to type in



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Kirel



Alien Highway



Way of the Tiger



Red Hawk

SOFTWARE

ARCADE

KIREL
STARSTRIKE II
GREEN BERET
THE YOUNG ONES
WAY OF THE TIGER
ALIEN HIGHWAY
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LEGEND OF THE AMAZON WOMEN
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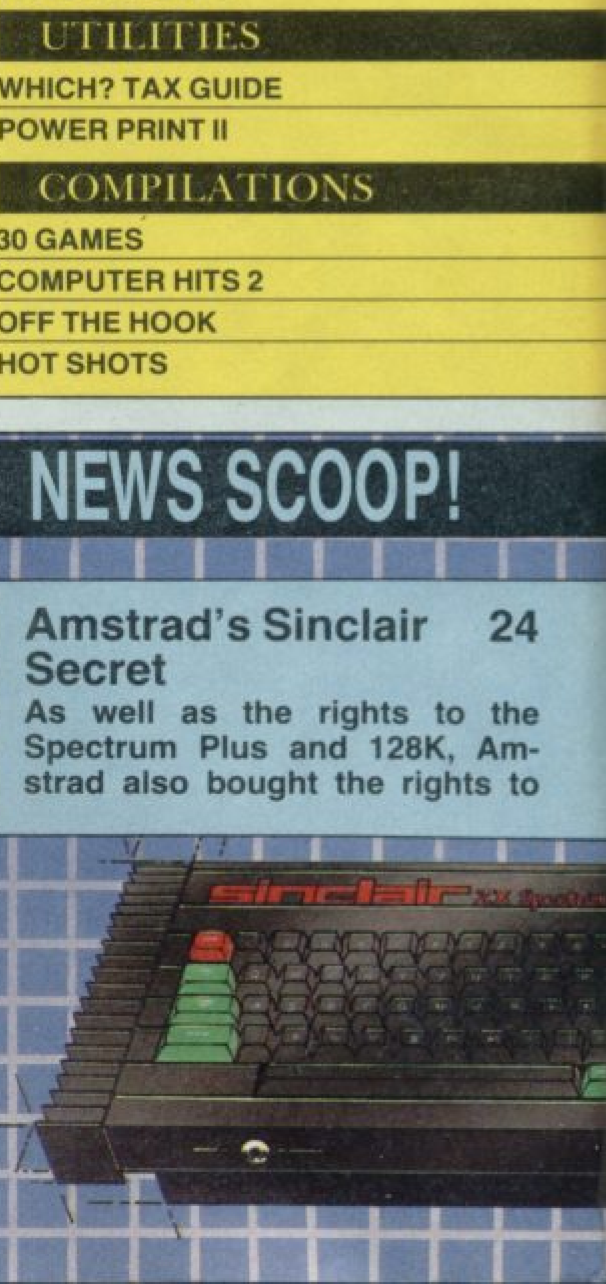
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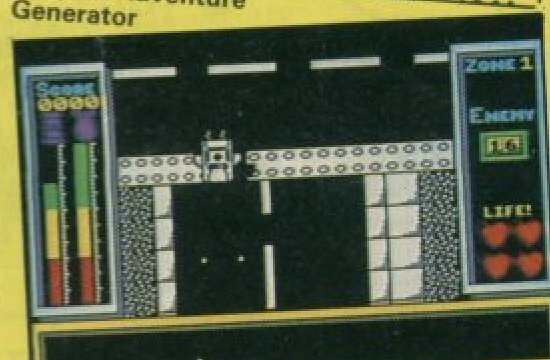
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Amstrad moves to beef-up Spectrum

SIX WEEKS after Amstrad's dramatic take-over of Sinclair's computer range details are beginning to emerge of its strategy for the Spectrum and QL machines.

First moves are designed to build confidence in the Sinclair machines and to reinforce the Spectrum as the top-selling home micro.

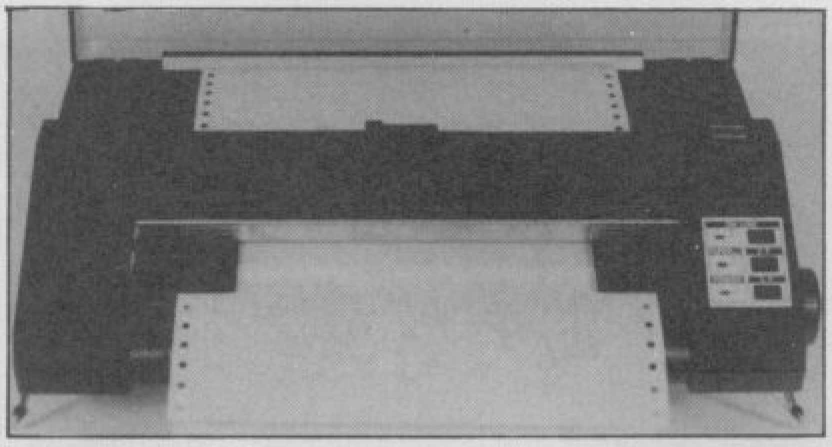
After that Amstrad looks set to introduce modified versions of the Spectrum in time for Christmas and may even introduce a new games console under the Sinclair banner.

Amstrad also seems likely to press ahead with work on a new super Spectrum development which was well advanced at the time of the Amstrad take-over. Codenamed 'Loki' after the Norse gameplayer God, the machine offers much of the sound and graphics power of machines like the Commodore Amiga, at a fraction of the cost. For full details of the 'secret' Loki project see page 24 of this issue.

An Amstrad spokesman declined to comment on possible price cuts for the Spectrum models.

On new Sinclair machines he said, "Amstrad has acquired all the intellectual property rights to future Sinclair machines but it is Amstrad's policy not to divulge information on any new product until about three weeks before its launch."

Initially, Amstrad now seems ready to substantially cut prices of the Spectrum Plus and Spectrum 128. The Spectrum Plus is likely to fall to £99.95 and be sold without its bundled software pack. The Spectrum 128 price should be chopped by an equivalent amount, down to £139.95. Amstrad has also indicated its willingness to sell off the QL technology to a consortium of interested parties (see QL story, page 8). It has also apparently sold off 20,000 QLs – most of the remaining QL stocks – to PMT, an overseas distributor. Over 20,000 rubber-key 16 and 48K Spectrums were also included in the deal worth more than £2 million.



Amstrad's first Spectrum peripheral? The DMP-2000 dot-matrix tractor/sheet fed printer

Having trimmed the Sinclair range to just the Spectrum Plus and Spectrum 128 Amstrad is now poised to further develop the Spectrum technology and is expected to shortly announce a range of new peripherals.

Both Amstrad's 3 inch disc drive and DMP-2000 dot-matrix printer are likely to be 'badged' with the Sinclair name, and both are expected to sell for around £160. Prior to the take-over, Sinclair had already abandoned Microdrives in favour of a disc system and Amstrad is likely to use the Sinclair-developed disc operating system, still under wraps at the time of the take-over. The only difficulty Amstrad faces with the 3 inch disc format is the continuing problem of maintaining a supply of the 3 inch discettes.

The suggested price cuts on the Spectrum models give Amstrad the breathing space it needs to develop its own modified versions of the Sinclair technology.

Sugar: One-plug route?



Alan Sugar, Amstrad's chief, is keen to take the Spectrum down the Amstrad 'one-plug' route with micro, storage medium and power supply all in one box.

The first of the 'Amstrad' Spectrums is expected to be a 128K version with a built-in cassette player and twin joystick ports to sell for £139 and be in the shops before Christmas.

That could be followed by a development of Sinclair's SuperSpectrum in the early part of 1987, featuring enhanced graphics and sound. A 256K or 512K version of the Spectrum is also very likely. There is also considerable industry speculation that Amstrad will launch a games console along the lines of the Atari VCS – badged with the Sinclair name. The likely candidate is a machine manufactured by Nintendo in Japan. The console has no keyboard, and cannot be programmed by the user. Instead its only control is a built-in joystick and the machine uses software on plug-in Rom cartridges. Andrew Wright at Activision who has used the Nintendo console says: "It's a fantastic machine with classic full-screen arcade-style graphics and there are plans to release it in the UK for around £85." Wright declined to name the company intending to market the console in the UK but agreed that Amstrad could be in the running.

Hackers found guilty in first forgery trial

HACKING IS now a crime, after a trial in April which made legal history.

Prestel hackers Steve Gold, aka Skweeky da Mouse, and Robert Schifreen, aka Bughunter, became the first individuals to be convicted of unauthorised 'hacking' in the UK. Both were sentenced under the Forgery Act and fined a total of £1350 plus ordered to pay £2000 costs. They plan to appeal.

The prosecution argued that a Prestel ID code and password have the same legal status as a signature on a cheque, and that by entering in somebody else's code number you are in effect committing a forgery.

The court heard how Schifreen – using a Spectrum and V2000 modem – accidentally discovered an ID code and password – 2222222222 and 1234 – which gave him access to a secret list of computer phone numbers on Prestel. Months later, he rang one of the computers and discovered the system manager and editor's passwords actually written on the first screen. Using them gave him access to a vast number of personal ID's and passwords of Prestel subscribers, including that of the Duke of Edinburgh. He and Gold were then said to have used a variety of accounts to wander around the database leaving joke messages in various secret areas.

British Telecom bugged the two hackers to collect evidence of unauthorised access which was used against them in the trial. The defence sought to demonstrate that the evidence was unreliable, and that British Telecom's security was incompetent. The jury, however, found them guilty on all nine counts.

"I'm relieved it's all over" said Steve Gold after the trial, "But we're going to appeal." Schifreen, who had already spent over £4000 towards his defence, said he was disgusted with the verdict.

The punishment certainly seems a stiff one in a case where the only serious damage appears to be to British Telecom's pride.

Unitsoft fails

UNITSOFT, the mail order discount software company, has ceased trading and can no longer be contacted at its mail order address or by telephone.

There is, however, some hope for customers who want their orders fulfilled. John McAndrew of TMS, Unitsoft's advertising agency, says: "Although the company ceased trading on Friday 25th April the creditors are hoping to get together to process outstanding orders".

Consortium fights for cash to buy QL

A NUMBER of companies are negotiating to buy existing stocks and manufacturing rights of the QL micro, following Amstrad's announcement that it is not interested in pursuing the micro.

Amstrad has so far had several firm offers for the stock of 19,000 machines and the rights to use that name, but none of the companies concerned have come up with enough cash. Amstrad wants to raise £1¼ million through sale of the stock and throw in the manufacturing rights to the QL free of charge.

The interested parties are said to include Timex, Digital Precision, Quanta, Eidersoft, and the Danish QL distributor Helmut Stuvern. All of the companies, except Timex, currently depend to a large extent on the QL for their livelihood.

Freddy Vaccha, managing director of Digital Precision, sees the Amstrad takeover as a good move and is confident that the QL will survive.

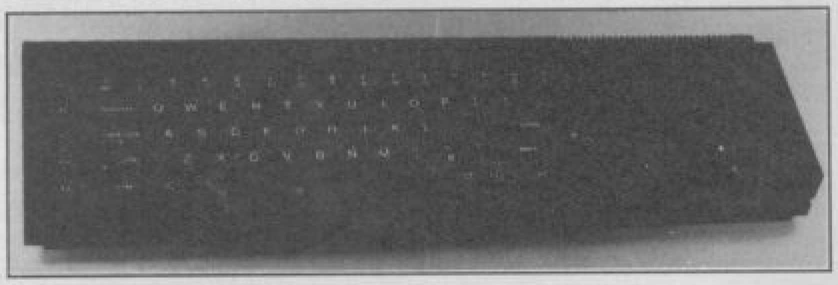
One possibility is that a new QL compatible disc-based machine will emerge from the wreckage of the QL.

Said Freddy Vacha, "It is possible that someone might soon produce a QL compatible machine.

If anyone approached us with a reasonable plan to take on manufacture the QL we have funds which we would make available to them.

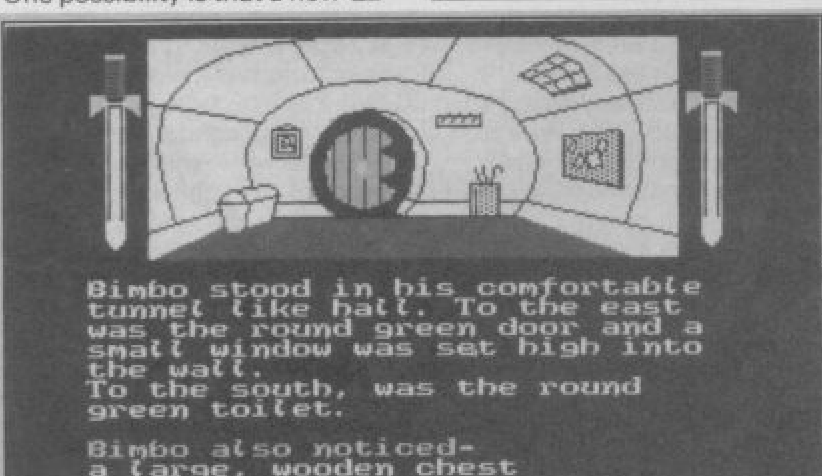
Apparently the rights to QDOS are owned by Tony Tebby – the software engineer who designed the QL's system software – and not Amstrad. "I happen to know that he's at present doing some modifications to QDOS," explained Vaccha.

Tebby was unavailable for comment, but it is understood that the operating system, which first saw light on the QL, may be implemented on several new micros. Those include a machine, the Microbox Five, which it will be possible to buy in either kit or ready-made form and which could include several operating systems including CP/M and MSDOS.



Leon Heller, Chairman of the independent users' group Quanta, hinted that an Amstrad deal was in the air but that it was likely to mean the end of the QL microdrives. Sinclair Research was working on a disc-based QL as well as a 32-bit 68020 version of the machine. Development of a disc-based computer had been finalised but no plans had been laid to market it.

Whatever the outcome, QL software houses and hardware manufacturers are unlikely to let the machine go under the Amstrad guillotine without a fight.



'Bored' gets prequel

THE BOGGIT, follow-up to the spoof adventure **Bored of the Rings** *by Delta 4, will soon hit the high streets.*

According to Fergus McNeil, Delta 4's driving force, "It's about the events leading up to **Bored of the Rings.** *Bimbo is unhappily saddled with a quest after he's sworn not to get involved in adventures, but Grandalf enters him for* The Price is Right *where he could win a camping holiday or a 14th share of Thorin's treasure. He's asked to put a value on the prizes and if he says 'sod all' he wins the camping holiday."*

McNeil assures us that the game, which continues the humour of **Bored** *and* **Robin of Sherlock,** *is not a lampoon of the famous Melbourne House adventure. "It's a piss-take of the book rather than the Melbourne House game."* **Sceptical Two** *– the second edition of Delta 4's own house magazine is also included on the other side of the tape.*

The Boggit *is to be marketed by CRL and retail through WH Smith and Boots. No price has yet been fixed.*

Genius at Virgin

LEISURÉ Genius, the company behind computer conversion of board games like **Cluedo, Monopoly** and **Scrabble,** has been taken over by Virgin Games.

Nick Alexander, managing director of Virgin Games, commented: "The acquisition of a company of the size and status of Leisure Genius marks a major step forward in our plans to be one of the top half dozen software firms.

It is the second recent purchase for Virgin. Earlier this year it acquired **Trashman** authors of New Generation.

Budget games on the attack

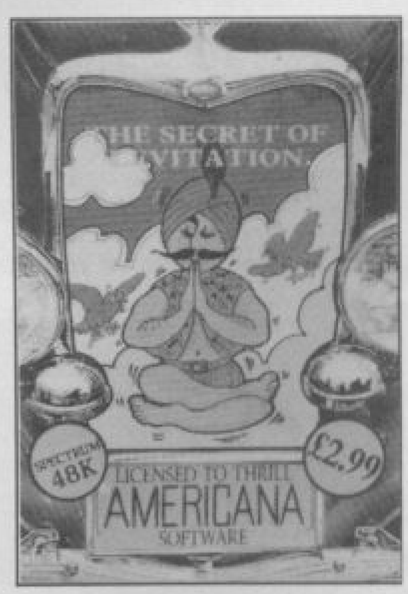
BUDGET games are in fashion, according to three major software houses – US Gold, Mikro-Gen and Interceptor – at present poised to launch cut-price software ranges.

US Gold started the move with a range of American imports which will cost £2.99 each. The initial batch of eleven games includes only one Spectrum title, called **The Secret of Levitation,** but the company aims to release more during the summer. Richard Tidsall, a spokesman for US Gold, says: "We will be importing some very good American titles but soon we aim to have games written specially for British machines." **The Secret of Levitation** has an odd plot. A group of Indian gurus have been studied and their attributes combined to challenge you – in a series of mini games – to the test of levitation.

The budget range from Mikro-Gen is equally exciting on the budget front. The company is to put some of its block busters of yesteryear into a budget range costing £2.99. Mike Meek, managing director of Mikro-Gen, commented: "Budget software is so successful and it makes no sense at all that something like **Automania** should sit on our shelves when it could be sold at a budget price.

"Look at Mastertronic. It has three or four titles in the Top 30." One of the first releases will be a double tape, including **Centipede** and **Galaxions.** New titles will be included but not before their full price attraction has worn off.

Interceptor Micros, famous for adventures like **Heroes of Karn** and **Tales of the Arabian Nights,** has launched a budget label called Players. The £2.99 range will include six Spectrum titles, the first of which will be **Cagara.** Your pet hamster Eric has just sprouted helicopter wings and, with his help, you must fight such gruesome terrors as the Immortal Ghost or Kleptomanica Bat.



More 128K hitches

PROBLEMS of software incompatability continue to plague the Spectrum 128.

Over thirty top titles are still causing difficulties and those which do not run directly on the 128 include **Elite, Fairlight** and **Tomahawk.**

One software distributor, Speedysoft, has begun to compile a list of incompatible software. According to Speedysoft, all the 48K programs on the list below will not load into the 128K machine. However, 23 of the problem titles will load if you do not have a Kempston joystick interface connected.

Most of the software houses concerned are converting their titles so that they will run, but that will not help 48K owners who already have the titles who plan to up-grade to 128K.

Fairlight, from The Edge, will soon be available on the 128. It will have extra locations and more characters. Owners of the original game will be able to up-grade to the 128 version by returning their 48K cassette, together with £3.50, to The Edge at the mail-order address on the cassette packaging.

Ocean will be converting three of its titles to run on the 128. Those include **Laser Basic** and **Laser Compiler. Laser Compiler** will be the first such title for the new Sinclair machine.

An up-graded version of **Movie** is planned by Imagine, and US Gold is bringing out an expanded version of **Winter Games. Spitfire 40,** a recent release from Mirrorsoft, is also to be up-graded.

More information about 48K and 128K compatibility can be obtained from Speedysoft – which runs a mail order catalogue – at 37 Church Road, London, SW13 9HQ.

Titles which failed the test:
Crash Smashes Gremlin
Elite Firebird
Fairlight The Edge
Impossible Mission Epyx/US Gold
Laser Basic Ocean
Laser Compiler Ocean
Macadam Bumper PSS
The Microdriver V2 Mirage Peripherals
They Sold a Million Hitsquad
Tomahawk Digital Integration
World Series Baseball Imagine

Games which will not run if a Kempston interface is present:
Alien 8 Ultimate
Art Studio Rainbird
Endurance CRL
Formula One CRL
Gyroscope Melbourne House
Hotshots The Force
Hypersports Ocean
Jet Set Willy II Software Projects
Max Headroon Quicksilva
Movie Imagine
Mugsy's Revenge/Mugsy Melbourne House
Panzadrome Ariolasoft
Red Arrows Database
Saboteur Durell
Tau Ceti CRL
Turbo Esprit Durell
V Ocean
The Way of the Tiger Gremlin
Winter Games Epyx/US Gold

WOW is for charity

WAR ON Want, the campaign against world poverty, has teamed up with leading software houses to launch a charity games compilation.

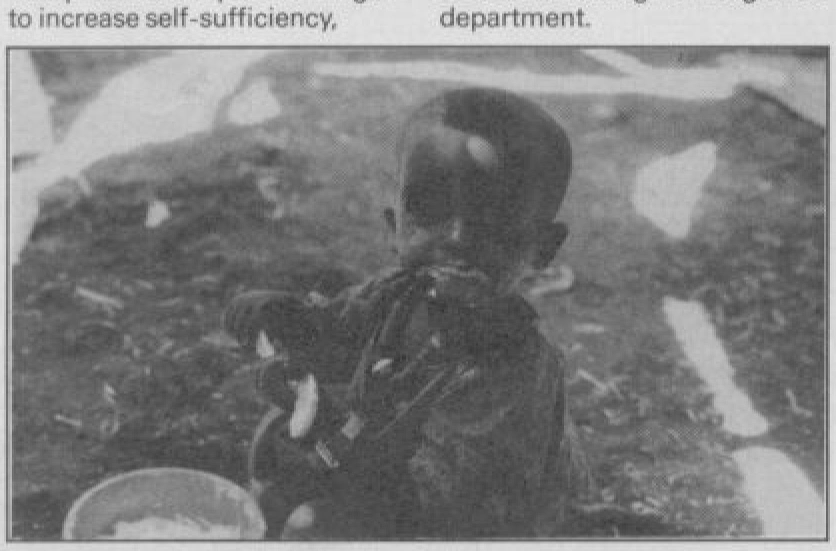
WOW Games, which costs £9.95, is sponsored by 14 software houses which include Firebird, Mastertronic, Psion, Quicksilva and Virgin.

Titles include **Hellfire,** from Melbourne House, **Horace and the Spiders** from Psion, **Dr Franky** from Virgin, **Rupert** from Quicksilva, **Hunchback II** from Ocean and **Mr Freeze,** from Firebird.

The software houses, manufacturers and distributors are producing the cassette at cost price and all profits will go to increase self-sufficiency, food production, better health and education in third-world countries.

George Galloway, General Secretary of War on Want says: "For War on Want, this is a major breakthrough. We hope to follow up **WOW Games** with other ventures that will involve young people in the war against poverty in a way that appeals directly to them."

WOW is available from WH Smith and Boots or by mail-order from WOW (Trading) Ltd, Room 62A, Three Castles House, 1 London Bridge Street, London SE1 9SG. You can also place Access and Visa orders by telephoning (01) 403 2266 and asking for the games department.



Xmas card protection

SHOULD YOU register your use of a Spectrum under the new Data Protection Act 1984?

If you use your micro to store the names and addresses of people in a club which you help run or do the mailing list for a voluntary organisation you probably should.

According to Francis Aldhouse, the deputy data protection registrar, "There are some home computers which have the power to store a lot of personal data and the capacity to be used within business. Most readers will be exempt if they only do use their computers to run their personal affairs or compile their own Christmas card list. If, however, you're compiling a company's Christmas card list or running a business with your computer which involves storing personal data then that's another matter."

If you have any questions regarding the act, the Data Protection Registrar has a series of booklets available. Write for more details to the Office of the Data Protection Registrar, Springfield House, Water Lane, Wilmslow, Cheshire, SK9 5AX and enclose an SAE.

Apology

IN LAST month's Sinclair User we indicated that Nexus founders Paul Voysey and Tayo Olowu collaborated on the game Shadowfire from Beyond. We would like to point out that this was not the case and apologise to Denton Designs, the team responsible for the program, for any inconvenience caused.



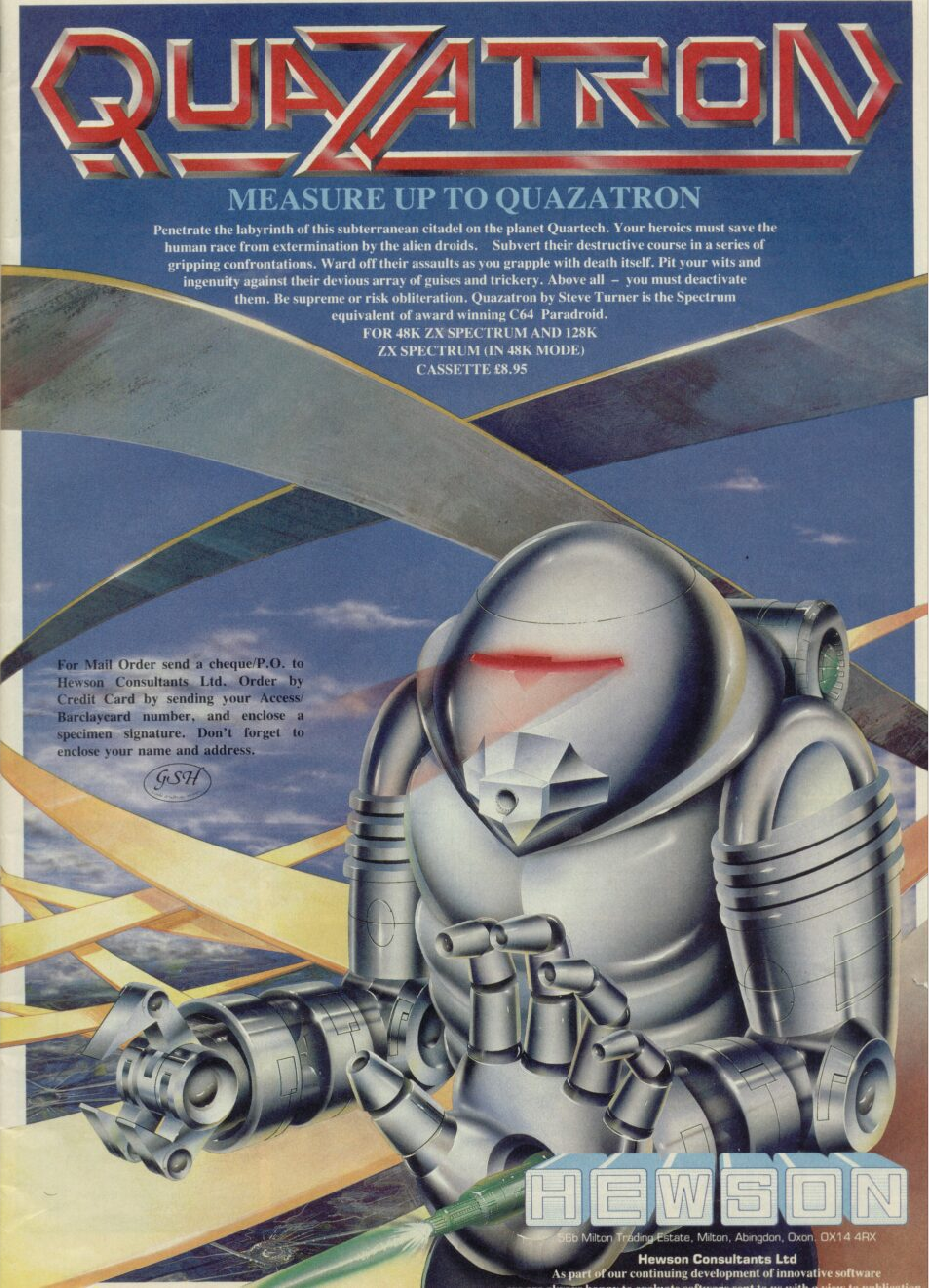
Jump compo winners

IN THE **Showjumping** competition which appeared in the April issue of *Sinclair User,* a Spectrum 128 together with a copy of Alligata's **Showjumping** simulation was the first prize.

G Horsman of Leeds has the first correct entry out of the hat with the winning answer of 1F, 2D, 3B, 4A, 5C, 6E.

A further 50 runners-up will each receive a copy of the simulation, these are:

Nathan Kay, Westgate on Sea, Kent; CPO John Skull, Hampshire; Dion Gibb, Fort William, Inverness-shire; Mrs Gray, Castleford, West Yorkshire; C J Howard, Studley Green, Buckinghamshire; Mrs W Robb, Gairloch, Scotland; S Meaker, Barnstaple, North Devon; Mr A Walton, Blyth, Northumberland; D M Shannon, Newtownabbey, Northern Ireland; Darryl Tebbs, Nuneaton, Warwickshire; Keith Wilkinson, Grange-Over-Sands, Cumbria; D A Gulliatt, Scunthorpe, South Humberside; Ben Bradley, Newmarket, Suffolk; Matthew Lightfoot, Maltby, South Yorkshire; J Veale, Heath Hayes, Staffordshire; David Edwards, Upper Holway, Somerset; B Farnsworth, St Agnes, Cornwall; T G Miller, New Addington, Surrey; Roger Poulter, Newbold, Derbyshire; S Allin, Enfield, Middlesex; I Mazey, Blakenhall, West Midlands; Nicholas Paul, Sittingbourne, Kent; Louis Minson, Wysall, Nottinghamshire; Geoff Spick, Oakwood, Derby; Paul Ridley, Ipswich, Suffolk; D W Bull, Coventry; C K Tinkler, Darlington, Co Durham; Spencer Smith, Dartford, Kent; N Baker, East Acton, London W3; Mr M Cunningham-Brown, Henley in Arden, Warwickshire; Mrs A R Harrison, Carlton, North Yorkshire; Stuart Masters, Buckingham; J Main, Leigh-on-Sea, Essex; Terry Frost, Woodbridge, Suffolk; Jamie Smith, Uttoxeter, Stafforshire; Christopher Hows, Cheshunt, Hertfordshire; M Williams, Llanelli, Dyfed; S Jones, Ascot, Berkshire; Benjamin Barry, Caldicoti, Gwent; Martyn Shepherd, Croydon, Surrey; Adam Gray, Todwick, Sheffield; S Lye, Templecombe, Somerset; Mr M Hopkins, Willenhall, West Midlands; Darren Routh, Grimsby, South Humberside; Paul Durnall, Stournridge, West Midlands; John Darley, Nr Barnsley, South Yorkshire; Maynard Paton, Doncaster, South Yorkshire; Miss C Latkovskis, BFPO 103; Miss Tanya Fraser, Kenya; P Morgan, Horsham, West Sussex.



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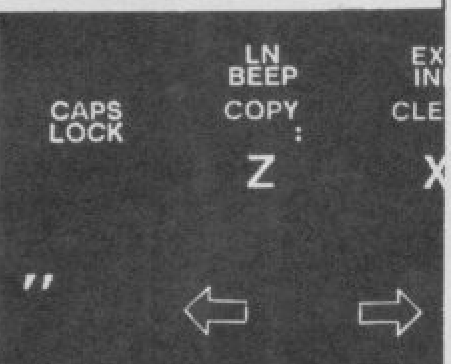
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- LISTINGS with optional automatic indentation of loops, IF, procedures etc. Works on existing programs e.g. you can choose to list:

```
  10 FOR n=1 TO 10: PRINT n: NEXT n
as:    10 FOR n=1 TO 10
            PRINT n
          NEXT n
```

- KEYWORDS can all be entered by typing them in full, or by the "single entry" method, or both in the same line; e.g. the line: 10print"hello":if x=1 THEN goto 100 will be recognised and listed normally.
- Upgrades to Release 1.8 customers: If you bought direct from us, there is no need to return your cassette - just quote the (approximate) original purchase date with your order; otherwise return your cassette and name your supplier. The upgrade price of £6.95 (£7.50 overseas) includes a new manual.
- ARRAY and string handling features include fast INSTRING (100,000 chars/sec) and INARRAY search functions. You can JOIN arrays together, delete, transfer and insert sections, change dimensions without data loss. LENGTH function gives dimensions. Ultra-fast array SORT - e.g. a$(500,30) will sort in about 3 seconds!
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- OTHER FEATURES, new or improved, are too many to describe: DO - LOOP structure with WHILE, UNTIL and EXIT IF; BREAK, CLEAR, CLOCK, CONTROL CODES, EDIT variables, ELSE, GET, KEYIN (programs can write themselves!) multi-LET, (L)LIST a "slicer", ON (works with line nos, procs, etc.) ON ERROR, OVER 2, POKE strings, POP, READ LINE, TRACE, USING, DPOKE. Faster GOTOs, GOSUBs and FOR-NEXT loops.
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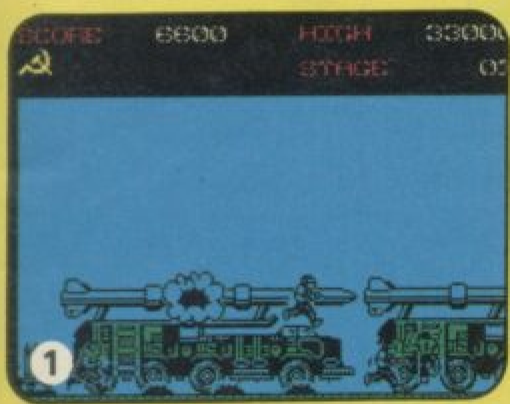
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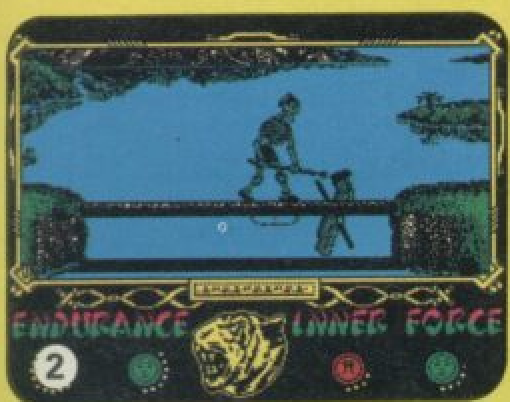
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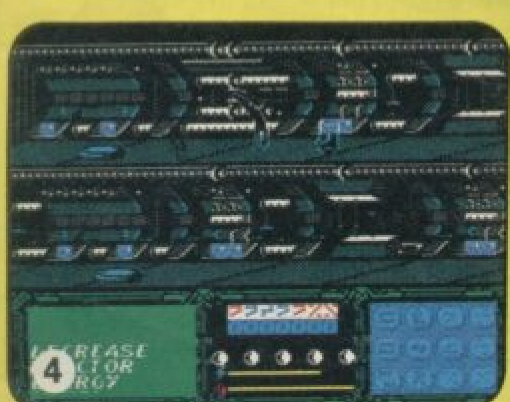
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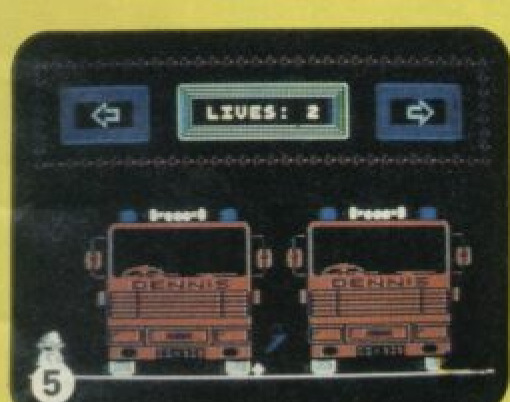
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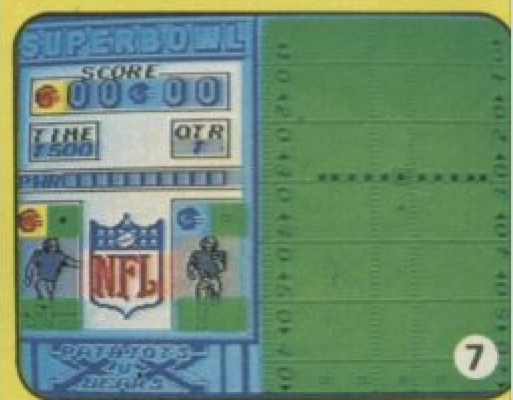


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Just what is incompatible?

WELL, WHAT a total and utter waste it's been splashing out the hard-earned readies to purchase Sinclair's new toy — the 128K Spectrum.

I had been converted to the Spectrum ways after borrowing my friend's Spectrum Plus and spent out £14.95 on **Elite** (The best thing since sliced bread!) only to find after being forced on pain of death to give the computer back, that **Elite** won't run on the 48K part of the 128.

Dismay! Shock, Horror!

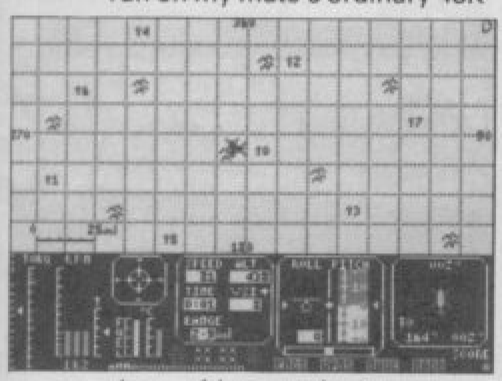
After taking it back to the shop six times and getting two replacements I thought enough was enough so I rang up Sinclair.

'Ah', said they, 'Faulty program, Firebird's fault!'

'So what about **Tomahawk**,' says I, 'That's exactly the same.'

'Contact the makers and complain,' they said, end of conversation.

The thing is, both programs run on my mate's ordinary 48K



along with several other games that do go in on the 128K. I'm stuck with these two games I can't play, the shops don't sell 128K, and suppliers say the same. I'm beginning to wish I had bought a Commodore 64, at least their **Elite** doesn't have Lenslok.

Poorer by £200 (I bought a data recorder) and four weeks of **Elite**-withdrawal symptoms before their revised program comes out! How will I make it! Will I have lost interest in **Elite** by then!

Yours disgruntled and annoyed.

Andy Wright,
Trowbridge,
Wiltshire

Retiring individuals

I WAS very interested to read the letter from Stan Wheeler (April) as I too am retired and find we have a lot in common.

I have difficulty finding friends my own age who are keen on computers. I don't care a lot for games but enjoy programming.

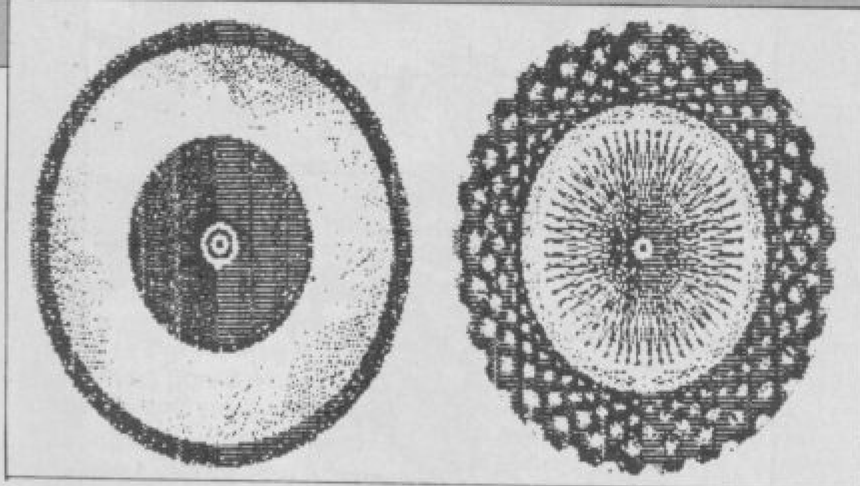
May I add my complimentary comments by praising Transform, also Opus Supplies, Oxford Computer Publications, Tasman Software and Beta Soft.

I invested in a Discovery 1 disc system and found some of the programs that I purchased earlier did not run smoothly on Opus, but after contacting the suppliers mentioned I can offer nothing but praise for their helpful and prompt response to my problems.

I am very sorry to hear that Uncle Clive has been forced to sell out. And to Amstrad! Oh dear!

G J Dodson,
Telford,
Shropshire

● *Oh dear . . .?*



At the whirl's end

HERE'S AN interesting development of James Spencer's graphics program — May issue. I think you will agree the output is more dramatic than that of the original. The listing is as follows:

```
5 LET m=1: LET n=1
10 PAPER 0: INK 4: BORDER 0:
CLS
20 FOR a=51 TO 10000 STEP
100
25 LET m=m: LET n=n+m
30 PLOT 65, 30
40 DRAW INVERSE n; 120, 120,
PI*a
45 IF INKEY$="p" THEN COPY
50 NEXT a
```

John Bailey,
South Croydon,
Surrey

Sounding off in the US

I LIVE in the United States, and I own a Timex Sinclair 2068 with a Spectrum Romswitch. I enjoy everything that goes on in the Spectrum world, and I pick up a copy of *Sinclair User* when ever I can. I just got the latest issue, and when I glanced through some of the articles, I saw something that really bothered me.

In your review of the Spectrum 128, you state the following when mentioning the advanced sound chip, 'Yes, for the first time in history Sinclair has finally produced a machine which sounds good!' I beg to differ. The 2068 has been around for several years, and it sounds great!

When Sinclair brought the Spectrum to us over here, he decided to change not only the name, but also add some little goodies, one of which was a General Instrument AY-3-8912 programmable sound chip.

From what you say about the sound chip of the 128, the two are very similar — they may even be the same chip. That of the 2068 also has three programmable channels, all of which can either be a pitched tone or a noise, and 'the result is very impressive.' Apparently the only differences is that of the programming. On the 2068, the proper syntax is the following:

Sound a, x; b, y; c, z, where *a, b* and *c* are channel numbers, and control such things as volume, decay, attack, and sustain, and *x, y,* and *z* are the values for those channels.

It may be that the 2068 doesn't sound as good as the 128, but it does sound very good itself. Too often it seems that we 2068 users here in America are forgotten, so just remember that we are over here, and will be keeping an eye on you. Keep up the excellent work and high standards of *Sinclair User*.

Mark Biery,
Beecher, IL 60401
USA

● *As if we would forget.*

Veteran on Tomahawk

REGARDING an article in the May issue of *Sinclair User* about incompatible games for the 128K Spectrum (**Tomahawk** can be added to this list). Mr R Williams mentioned **Barry McGuigan's World Boxing.** Well in the new *Software World* catalogue it is advertised on page three for the Spectrum 48K and 128K.

Your answer to Mr William's letter was that you yourself had compiled a list of incompatible games for the Spectrum 128.

I have recently purchased a Spectrum 128 and do not want to waste my money on games that will not run on the machine as there are quite a few 48K games I would like to obtain.

E Sproat,
Leam Lane Estate,
Gateshead, Tyne & Wear

● *The list referred to as appearing on page 7 of our May issue was a casualty of the news that Amstrad had taken over Sinclair which only came through after we had gone to press.*

A fully up-dated list has been run this month.

Bourne in

I AM writing to complain about two things.

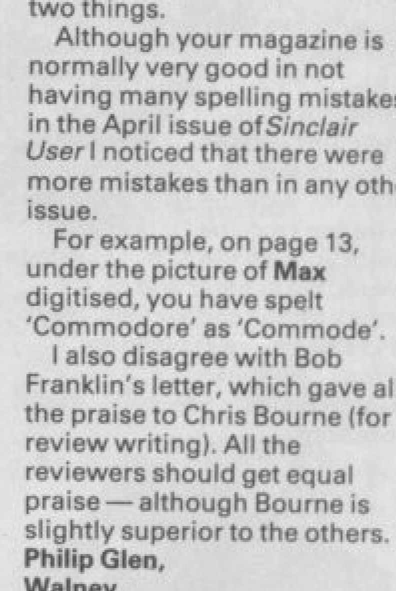
Although your magazine is normally very good in not having many spelling mistakes, in the April issue of *Sinclair User* I noticed that there were more mistakes than in any other issue.

For example, on page 13, under the picture of **Max** digitised, you have spelt 'Commodore' as 'Commode'.

I also disagree with Bob Franklin's letter, which gave all the praise to Chris Bourne (for review writing). All the reviewers should get equal praise — although Bourne is slightly superior to the others.

Philip Glen,
Walney,
Barrow-in-Furness,
Cumbria

● *It is the very same supposedly 'superior' Bourne who first used the term 'Commode' to take the micky out of Commodore — we thought you all knew.*



► 16

Hiccup for the 128

YOU ASKED for news of any software, or utility for the 48K Spectrum which is incompatible with the 128.

I purchased the 128K and printer package from Dixons, not realising that the printer will not work with 48K software. Presumably word processing software for the 48K will not be compatible with a 128K either? Probably someone with more knowledge of computing would have realised this anyway, but I can't be the only ignorant purchaser in Britain.

J A Wood,
Kingsley,
Warrington

● *We know of two 48K word processing packages which are compatible with the 128K, and we have print-outs to prove it.* **Tasword Three** *and* **The Last Word** *were reviewed in the May issue.*

Lenslok cracked

I REALLY have beaten the problem of using Lenslok on Rainbird's **Art Studio** and here's how. Centre up the lens; trigger the OK; slide the lens left until you can read the O; then right until you see the K. It really does work. Press enter and do the same for the code letters. Hey Presto! You're in business.

Frank Choppin,
Coton Fields,
Stafford



Rampant pirates

I'M FED up with complaints from software companies which go on about rampant piracy of their titles overseas. Take Istanbul, for instance. There are about 100,000 Spectrum owners in Istanbul and not one shop which sells original games.

And there are two versions of pirated software. The first is turbo, while the second is the normal loading tape. I have **Elite** — no Lenslok, and I can play the game! It's fabulous, but who wouldn't want an original? Who likes games with no flashy covers and no instructions? We at least want the chance to buy the real versions and we are willing to pay.

Think of 100,000 people buying a copy of **Fairlight** or **Tomahawk**. It doesn't matter how much security there is on a game — it can be cracked, even turbo loaders. I have about 200 games. Not one is original.

Orhan Köseraif,
Istanbul,
Turkey

● *The reason they go on and on about it is because of frustration. Every company has to make money to survive. Piracy eats into both the revenue of each title and the effort that houses can spend on development. Cutting down piracy means better software.*

But most companies have weak overseas links. Foreign legal actions are expensive. And software firms are largely powerless to control the problem. In the end it's down to you — and others — not to buy pirated material.



Addicted to fun

I AM WRITING to express my views concerning the addiction of games playing and have come to the conclusion it's about time someone uttered a sensible comment on the subject of computer gaming.

Playing computer games is fun, yes, but there is a limit and some people go overboard. Although, after last year's wintery summer I would have imagined there to have been many computer lights switched on, I feel deeply that one should use the machine one day and the next day to do a physical activity to set free all those everyday frustrations which build up in all of us.

Bulging blood-shot eyes, frazzled nerves and a blinding headache are certainly not, in my view, the constitute terms of a healthy vital life.

My advice to all gamers is use your initiative. By all means fire away, but don't sit down for all the hours God sends or you may end up a nervous wreck — sore backs and screaming headaches. Don't take my word for it. Take Wendie Pearson's article 'Games Mad?' in the February issue which was both bizarre and most revealing, yet somehow quite frightening.

Sinclair User is the only magazine I have come across during four years of using computers which has actually produced detailed factual information on the subject of addiction. So I congratulate your team and hope to read further articles similar to this one.

Andrew Ritson,
South Wirral,
Cheshire

What a turkey!

YOU ASKED in February's issue for nominations for turkey software. Well on price, graphics and boredom factor, I have no hesitation in nominating **Shadow of the Unicorn.**

But what about turkey hardware? Yup! I have a nomination for that as well — the Philips Automatic Data Recorder, model D6450. I bought this for £14.99, reduced from £39.99 in a Laskys sale. What did I get? A battery powered data recorder! The mains adaptor cost me an extra £8.00. I got a data recorder with sockets for leads to connect it to the computer, and these are loose — with obvious results; a data recorder which is very temperamental in use as the heads seem to be out of alignment; and a data recorder that, while providing an access hole in the loading door for azimuth adjustment, is impossible to adjust as the relative screw lies much lower than the said adjustment hole.

This unit is manufactured in Austria — one of the countries that has complained about the quality of British goods!

D G Griffith,
Cheltenham,
Gloucester



Mad Celt strikes back

I WOULD just like to make a few points:

1) As the definitive bemused Celt, April issue, I would like to point out that many amazing things are Celtic — Guinness, U2, Bob Geldof, Gaelic, lots of rugby teams and so on.

2) The Mad Celt uses green backgrounds because of their Celtic significance — Shamrock, Emerald Isle and so forth. As for the Blue, I can only suggest he too has a liking for woad.

3)Although I forgot poor Gremlin on Valentine's Day, if he would tell us when his birthday is I would gladly send him a nice card.

4) For your information, Bill — the Train Spotters Award — as mentioned in a previous issue is a device used by 'Bore Spectrum' to cover up their so called deliberate mistakes. That rag has darkened my bemused Celtic bedroom only once and it shall not do so again.

Finally, may Chris enjoy his Lunchbreaks and may Bill finally wash his cords.

Spog the Celt



Hair apparently held hostage

FANCY giving **Rambo** three stars — it deserves at least five and a half. Don't you enjoy going around mindlessly destroying men with explosive arrows and other such weapons like anti-tank guns, and slitting their throats with large sharp knives?

I'm sorry to go on but here is the most important point. I have kidnapped three of Clare Edgeley's nostril hairs and if you don't give me a Spectrum 128 with **Gladiator,** I'll eat them with my sheep's eyes on toast for brekkie.

Yours insanely,
Tim Greig,
Caerphilly,
Mid-Glamorgan

PS I've never, ever played **Rambo**, I just like annoying people.

PPS Edgeley's nostril hairs are pining. Yuk! Yuk!

● *Keep them. Edgeley hasn't noticed they're missing yet.*

Microlite fall out

A FEW hours ago I bought the latest edition of *Sinclair User* from my newsagent. Looking forward to a great mag, I dashed back home where I randomly opened it at News.

Staring me in the face (wait for it) was a piece about a certain 'Microlite Aircraft'! Whatever next? First the C5 then this!

I pressed on, only to find that it 'boasts' an airspeed of 25 mph. Are you/Sinclair mad? Is your trusty typewriter giving up the ghost? Whatever the answer, a light aircraft seating five only just takes off at 70 mph. At 25 mph it would literally fall out of the sky, let alone take off. As for using a standard bus lane as an emergency landing strip . . . well just think!

If this was an April Fool, it was a good attempt.

Jeremy Malins,
Hampton Hill,
Middx

● *Well we couldn't fool you Jeremy. No chance of interesting you in tickets for the inaugural flight I suppose . . .?*

Lonely ROMs

WOULD you like to write to a 17-year-old boy. I own a Spectrum and would like to swap programs, games, pokes, ideas etc with Spectrum owners from anywhere in the world
Adar Weidman,
Melchet 59,
Tel Aviv,
64287 Israel

I AM a 16-year-old boy who owns a 48K Spectrum. I would like a penfriend whom I can swap progams with.
Borge Chirstian Haaland,
Fagerveien 39,
1464 Fagerstrand,
Norway

I'M A 10-year-old computer enthusiast and I would like a pen-pal from anywhere in the world. I would also like pokes and tips on Transformers, Finders Keepers, Atic Atac.
Charlie Ivens,
Brambletye,
East Grinstead,
Sussex RH19 3PU

WANTED dead or alive! Penpal friend owning a 48K Spectrum age 13 to 19. Reward: the best penpal friend!
Antonio Yose Nogueita,
A.V. General Rocadas 62, 5°esq.,
1100 Lisboa,
Portugal

I'M a 12-year-old girl. I own a 48K Spectrum and would like a boy penpal (not in the UK) to swop games and hints with.
Jennifer Wendel,
Tahquamenon,
Megs Lane,
Buckley,
Clwyd,
Wales CH7 2AE

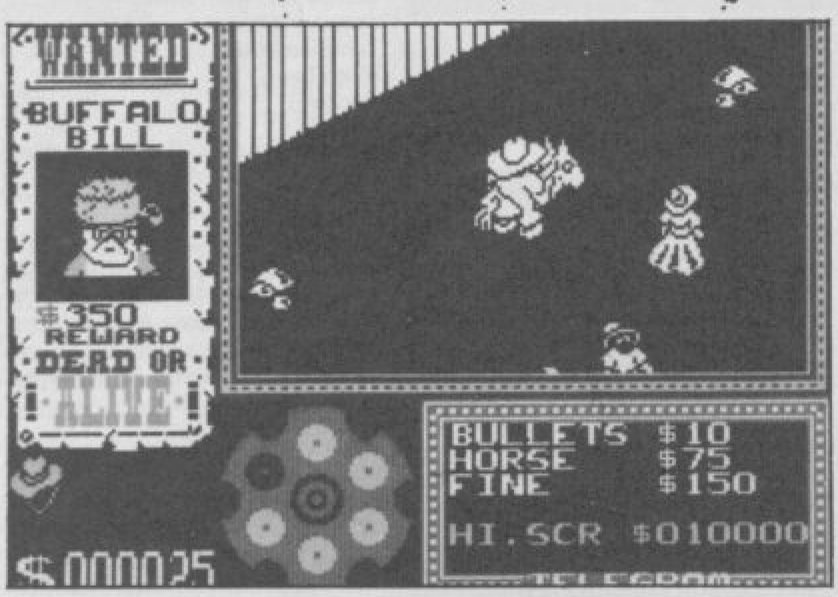
I'M A 21-year-old "Danish Dynamite" who would like to exchange experience and programs with any person from any nation. I have plans to make a sort of club, where pokes etc, can be exchanged over the whole world. Please write to me at this address:
Jimmi Nielsen,
Vestergaardsvej 40 Stv.,
2600 Glostrup,
Denmark

I AM a 16-year-old girl and I own a 48K Spectrum. I am interested in playing games, especially adventures. If you are interested write to:
Suzanne Gough,
11 Farnham Close,
Eaglescliffe,
Cleveland TS16 0NF

I WOULD like to have a foreign penpal. I own a 48K Spectrum. I would like,to exchange software. I am 14 years old.
Steven Leishmans,
24 Whitehill Gardens,
Musselburgh,
Scotland EH21 6PQ

ZAPCHAT

Keep those tips, hints and Pokes rolling in!



Gunfight

I HAVE successfully killed nine bandits in **Gunfight** with a score of $22,620. The little boys are jumping up and down and are not telling you which direction the bandits are moving in, but which direction you should go to get the bandits. The bandits you have to kill are: Buffalo Bill $350; Billy the Kid $700; Sundance Kid $1,500; Jesse James $2,000.

When you have killed Jesse James you get a bonus with some music and more money bags come flying down, this time at a faster speed. Then Butch Cassidy $2,500; Ma Baker $3,000; Wild Bill $3,600; Rumpo Kid $4,000.

When you have killed Rumpo Kid you get another bonus and more money bags come flying down at an even greater speed.

Finally Clever Jake $5,100; Milky Bar Kid $6,000.

After the second bonus, the playing area becomes infected with tumbleweed so look out!

I have also scored 298,370 on **Commando**, beat that!

Scott Brown
Redcar
Cleveland

Commando

HERE ARE some more tips for **Commando**.

If armed with a bazooka, you can pass through the enemy without being killed. The same applies to other troops except they fire at you more rapidly than your bazooka can fire back, so you can pass through them only when they are not firing.

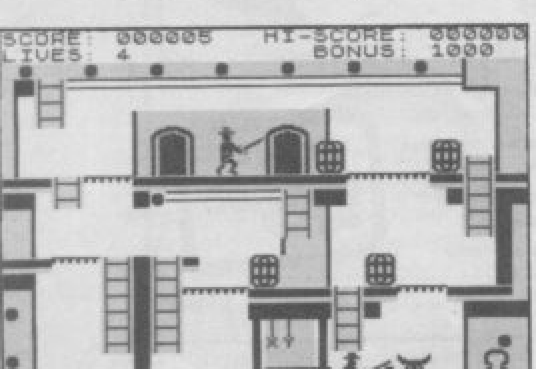
You cannot destroy the tank using hand grenades, but you can destroy it by hitting it on the turret with your machine gun. You can pass under the trucks without being killed.

You cannot kill the enemy in the trenches with your machine gun — use your grenades.

In almost every zone is a wall with a tunnel. Don't attempt to pass through the tunnel but stand in front of it. The enemy will appear and you can zap them while they are still inside the tunnel. They will not fire at you except those in zones three and 11.

You can gain many points and extra lives in this way. My highest score is 683,650 on zone 16.

Eros Forenzi,
Italy



Zorro

DOES ANYONE know what to do after you get the chalice in **Zorro**? I've got the man in the bar drunk, I've branded the bull, I've got rid of the flashing thing on top of the barracks, I've put the bells in their place and I've opened the grave, but that's as far as I've got.

Julian Ridgeway,
Monselton,
Swansea

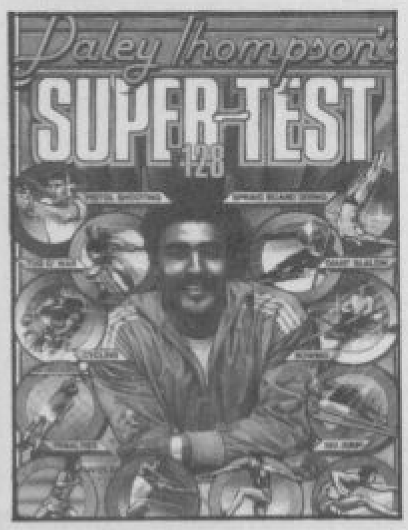
Elite

IN REPLY to a *Zapchat* letter in December concerning **Elite**. I too have come up against the same kind of thing where it fires rapidly at you. The only difference with what I came up against is that it launched kraites and sindwinders at me first.

I have now come to the conclusion that it is either a space dredger or something not in the instructions. I still think it is a great game.

Neil Reynolds
Ravenstone
Leicester

D Thompson Supertest



CAN ANYONE out there tell me how to get out of **Daley Thompson's Supertest** when I have finished playing it without having to press the reset button?

C Griffiths
London NW8

Sweevo's

HERE ARE some more Pokes for **Sweevo's World** which make tins, bears and boots disappear as soon as you enter a room containing one.

POKE 35732,37
POKE 34912,10

Wayne Barrow,
Doncaster,
South Yorkshire

HERE ARE two Pokes which give extra lives in **Sweevo's World.**

POKE 37008,x — x is the number of lives

POKE 33219,0 — gives infinite lives.

James Baldock,
Waterbeach,
Cambridgeshire

Ping Pong

I CLAIM to be the first to have a highest score of 999990 whilst beating the computer 22-0 on level 5 of **Ping-Pong**. Can anyone beat this?

Darrell Williams
Reading
Berks

PS Can anyone tell me how to open the doors on **V**?



I AM writing to say that I have beaten Konami's **Ping Pong** four consecutive times on level five, (11-3), (11-4), (11-7) with a score of 41,600, without using any of the many bugs in the game.

Paul Anderson
Merseyside

PS I like your mag. but where have the Gilbert Factor ratings gone for the last 4 or 5 months?

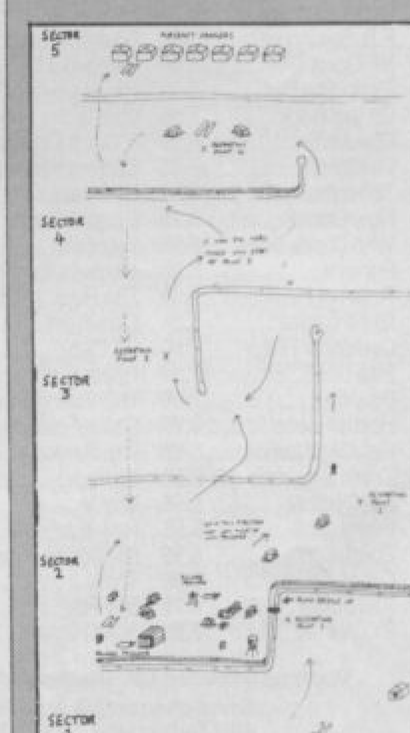
● *We turned them into stars*

Rambo

FOLLOWING Francois Venter's tips on **Rambo** — May issue — I have enclosed a map and some more hints for those still trying to find their way round.

Section 1. You must collect your weapons in this area, but first make sure you have the bow and arrow and bomb arrow. Now go to the bridge and blow it up. If you die before you blow up the bridge, you will go back to the start.

Section 2. Find Banks, cut him loose and run to the north. If





Back to Skool

I AM writing to inform you about a bug in the program, **Back to Skool.** If you go into the cloakroom, to the far wall, then turn around, fire your catapult twice and hit into air. Then if you press K (Kiss) you completely disappear. You are able to move but only in the direction of the girls school, you cannot go in the opposite direction.
Ryan Pearson
Bridlington
East Yorks

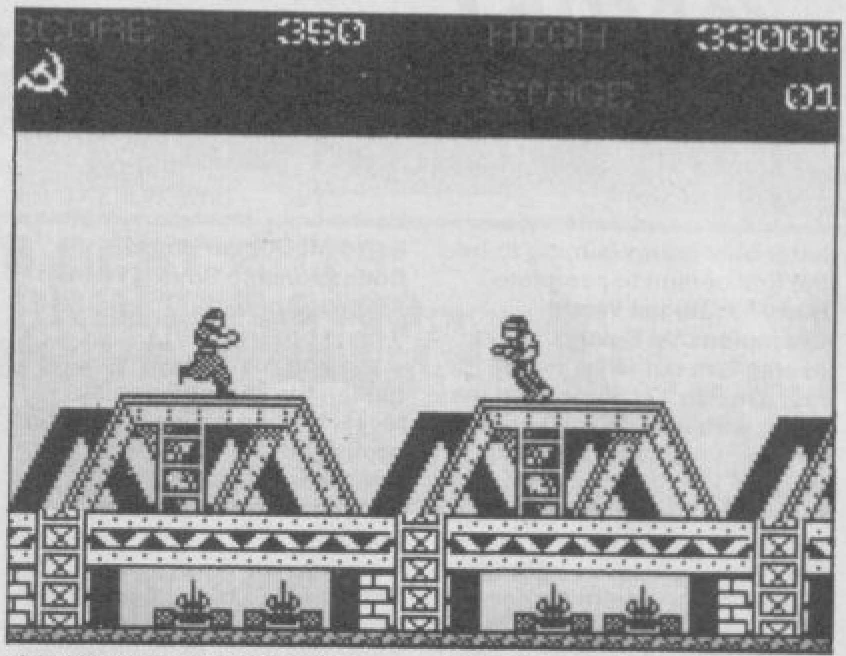
Green Beret

I AM writing about the newly released game from Imagine **Green Beret.** I bought it as soon as it was out. I can get to the bridge — past the missile base and the harbour.

On the missile base it is best to go up the ladders as soon as possible for two reasons: when you go up the ladders you can kill the flame thrower. If you stay down you can — if there is no-one above you — jump up to kill the soldiers that jump at you.

To kill those that do jump you must jump and stab them, then they will die.

Carry on along the top and when you come to the last ladder, go down it and fire a flame thrower in the direction of the mortar, then carry on to the tanks. When you get there, go on top of the first tank — watch out, those flashing things are land mines — at the end of the tank fire a flame thrower at the commando on the tank in front. This will earn you points and flame throwers, then jump down at the very end. You must jump out and up not just walk



right because the land mines are directly below.

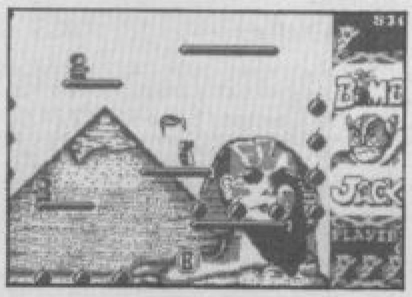
When the screen stops scrolling a van will come along, go to the left of the screen and face the soldiers and you can fire flame throwers at them or you can try to kill them with the knife — there's lots of them though. When they are all dead then the harbour come into view at long last. Go along and up the first ladder and then right.

When a mortar is fired you can jump over it, kill the commando and after repeating this twice, go down the ladders and fire a rocket at the mortar operator.

Along up on the top of the hangers and then right to the end and fire a rocket at the parachutist. Repeat at the next hanger and move along the top until you reach the last ladder. Go down and fire a rocket at the mortar. Past the next hangar to the submarine when the screen stops scrolling — turn left to meet the dogs and their handler.
Andy Osbourne
Watford

you die before releasing Banks you will restart at point one. Return with the helicopter and release the other prisoners, then go back to the hangers in the chopper.
Section 3. Now the pressure's on. The enemy are attacking from behind. Work your way through the chicane. If you die in the chicane, you will restart at point two.
Section 4. Well done, you've made it to the helicopter and survived the torture attack at the chicane on the way. And now you've got to go back to get the rest of the prisoners and the rocket launcher if you haven't already picked it up. Once you've got the remaining POWs, and while you're airbourne, you'll be attacked by another helicopter.
Section 5. You've made it, but there's one more task. To finish you must go into one of the hangers. But which one?
Philip Barton,
Camberley,
Surrey
Key to the map opposite.
——▶ Route to collect the first prisoner and helicopter
---▶ Return trip with helicopter to collect rest of prisoners
————▶ Home run in helicopter to the hangers

COULD anyone help me I am stuck on **Rambo.** I cannot find or get into the P.O.W. camp. I can get all the weapons but I just can't get into the camp.
Ross Caldwell
Stonehaven



Bomb Jack

ON ELITE'S **Bomb Jack,** if you have a Quickshot II, whilst playing the game turn the joystick onto auto-fire. This will enable you to get bombs that are in horizontal rows, this will help you a great deal. Also you can dodge the monsters.
Gary
Romford
Essex
PS My high score 98,590.

Back to the future

I CLAIM to be the first person to complete **Back to the Future** by Electric Dreams.

I completed the game on the April 14 1986 with a time of 5 minutes 27 seconds. At the end a spectacular De Lorean sports car then races down the street and the game finishes with 'Well Done'.

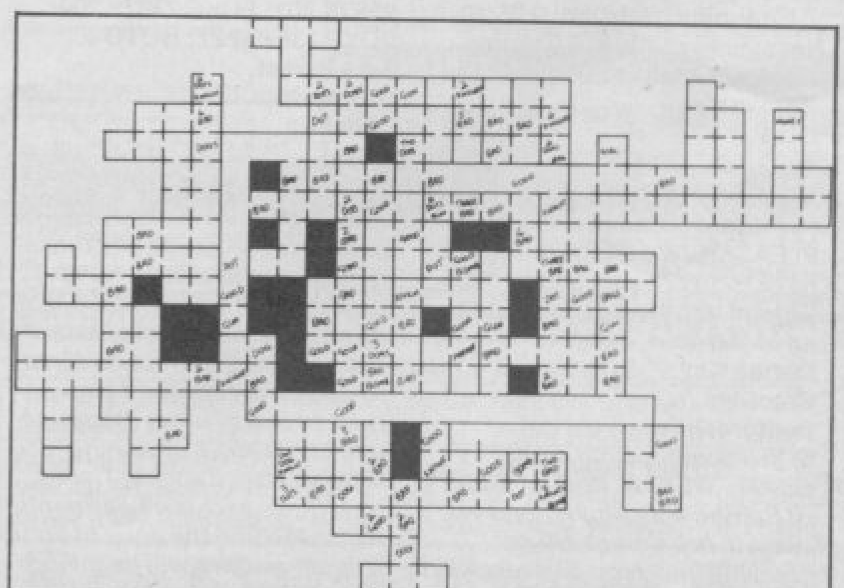
I am also stuck on how to get past the bouncing soldiers on **Green Beret** by Imagine.
Alastair Craig.
Reading

Movie

IN IMAGINE'S **Movie,** to get the bomb and money go to the room with the parrot which is near your office. Say 'Open Sesame' and the suit of armour will move. To get the gun go to the yellow sitting room near your office. It is on top of the radiogram.
Peter J Francis,
Brentwood,
Essex

HERE IS a way to distinguish the bad girl from the good girl in Imagine's **Movie.** When the bad girl goes into a room with hoodlums in it she does not get killed, but when a good girl enters a room filled with bad guys, they shoot and try to kill her.
Daryl Cope,
Dormanstown,
Redcar

I HAVE discovered a bug in Imagine's excellent game **Movie.** If you go to the cinema and walk upwards towards the screen, you will see a man or a woman walking around. When asking the man or woman what the password is, they say to you, either: 'I hate you', or 'I'll kill you.' You then wait and they say, 'Hello'.
Craig Lovelace,
Garboldisham
Norfolk



Barry McGuigan Boxing

IN REPLY to Karl Jefferey's letter May issue claiming to be the first person to complete **Barry McGuigan World Championship Boxing**. I have beaten him but I may not be the first. On Feb 17 I completed the game with a record of 34 fights 30 wins 29 KO's and four fights lost.

I had 18 title fights against McGuigan knocking him out everytime in the first round. When you're in training have three weeks heavy bag and nine weeks' road work which gives your fighter good endurance and strength.
Maurice Williams
Cardiff
S. Glamorgan

IN REPLY to Karl Jeffery's letter May issue in which he claims to be the first person to complete **Barry McGuigan World Championship Boxing** I would like to tell him that I completed it on February 2.

Also on **Matchday** I have beaten the computer on all levels 14-0 on amateur, 12-0 on professional and 12-0 on International levels.
Matthew Strudwick
London

I'M WRITING to tell Karl Jeffery that he is not the first to complete **Barry McGuigan World Championship Boxing.** I didn't loose a fight, and beat Barry in the second round and it took me one hour on February 7.
Duncan Hedger
Fleet
Hants

Mikie

I HAVE some tips for **Milkie** when you are out in the corridors, shout towards the notice boards, only on the second floor.

Another tip: on the menu screen in **Jason's Gem**, press S,W,A, at the same time and you get infinite lives. Then you should be able to complete the game.

If you are getting fed-up with Ocean's **Moon Alert**, here is a POKE for you to get 100 lives. POKE 42404,255.
Matthew Wade
Bristol



Rockman

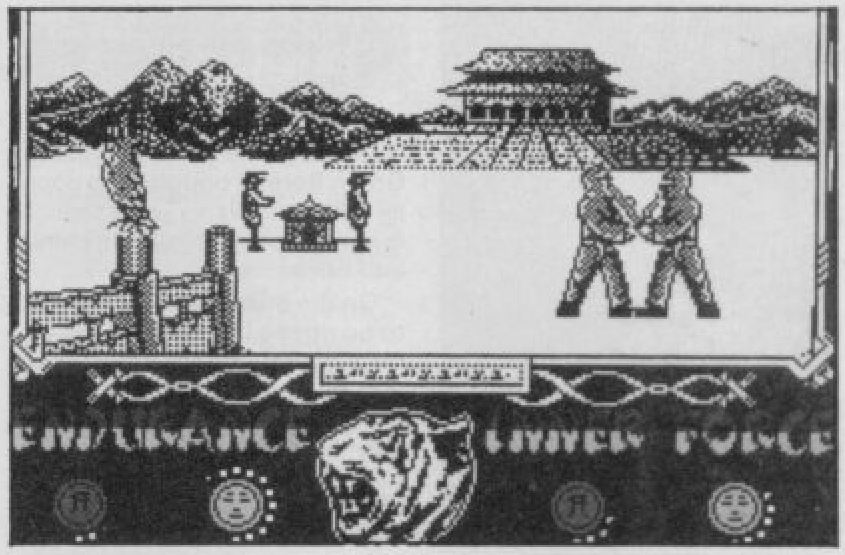
CAN ANYBODY tell me how to complete screen K on **Rockman**? And has anyone changed from the frog in Mikro-Gen's **Witch's Cauldron**? Everytime I change I get eaten by Mouctuper.
Paul Turner,
Dartford,
Kent

Winter Games

I CAN beat M Jowse in the last editiion of *Sinclair User* at the superb **Winter Games** program reviewed by John Gilbert with my personal best score of: Ski Jump: 225.9 points; Hot dogging: 10 points; Speed skating: 0.35.1 secs; Figure skating: 4.9 points; Biathalon: 2.52.4 mins; Bobsled: 0.25.10 secs; Free skating: 6.0 points.
Anatole Franklin
Ramsgate
Kent

Avalon

FOR INFINITE energy on **Avalon**, use the following Pokes. After MERGE"" ENTER: POKE 23782,2: POKE 23876,201: POKE 23878,204: POKE 23879,227: GOTO 0.
Jack Street,
Stockport,
Cheshire



Way of the Tiger

I CLAIM to be the first person to complete **Way of the Tiger**.

On April 20, after beating the eight unarmed combat fighters, four pole fighters and four sword fighters.

When unarmed the large fighter is easy to beat by doing flying kicks all the time.

With the pole the Ninja cannot move when you use the low jab.

With the sword the man in armour is easiest to beat using the head splitter and low sweep.
Jamie Kellett.
York
PS These are my best scores for **Winter Games**: Ski Jump 234.6; Hot Dog 10; Speed Skating 37.5 seconds; Figure skating 3.4; Biathlon 1m 25; Bobsled 25.72 seconds; Free skating 7.3.

In the instructions it says the highest points on free skating is 6.0.

AM I the first to complete **Way of the Tiger.** I completed the game on Sunday April 20 in one hour.

To master the game I've included some tips

Unarmed combat: there are eight monsters which you have to kill to master this sport.

Ninja: keep on doing flying kicks at him if you do this the dots on your face at the bottom of your screen should disappear quicker. After a while try some ankle kicks.

Goblin: keep on doing ankle kicks and mid kicks but beware that the goblin changes to a ghost, keep on doing flying kicks or high kicks. After you have killed the goblin which changes into a ghost there is a bubbling blob on the ground that changes into the same creature which I have just mentioned so do the same thing on it.

Minator: when the minator advances to you just try a simple move on him which is called a mid kick. Repeat this move over again and he should die.

Second Ninja: just repeat what you did on the first ninja.

Second Minator: just repeat what you did on the first Minator.

Ogre: to beat this bulky object you have to do flying kicks. It will take quite long to beat it. So if your fingers ache hop away from him until you are quite far away from him. When you have beaten him you have to fight another ogre so keep on giving him the same routine you did with the first ogre.
Pole fighting Skeleton: all you have to do to beat him is keep on giving him jabs and face jabs with your pole.

When sword fighting: on all the creatures keep on doing head blows and neck blows.
Lee Nuttall
Wolverhampton
Staffs

Commando

IN THE May Zapchat David Batson asked for the endless lives code for *Commando*. Well I have got the goods. Just type in the listing below — save it if you want — then RUN it and play your *Commando* tape from the beginning.
Stephen Jones,
Thornes,
Wakefield
PS I have got a score of 450,000 and got to area 30 and still no fortress! Is there such a thing?

```
10 CLEAR 40000
20 LOAD "" CODE
30 POKE 65267,203
40 POKE 65379,68
50 POKE 65380,15
60 POKE 65382,108
70 POKE 65383,185
80 FOR N=65482 TO 65497:
READ A: POKE N,A: NEXT N
90 RANDOMIZE USR 65263
100 DATA 175, 050, 122, 104,
050
110 DATA 004, 108, 050, 005,
108
120 DATA 050, 006, 108, 195,
030
130 DATA 100
```

More maps please

PLEASE, please, please can I have more, I mean some maps. I spend hours mapping out adventures.
Darren Kay,
Cranfield,
Bedfordshire

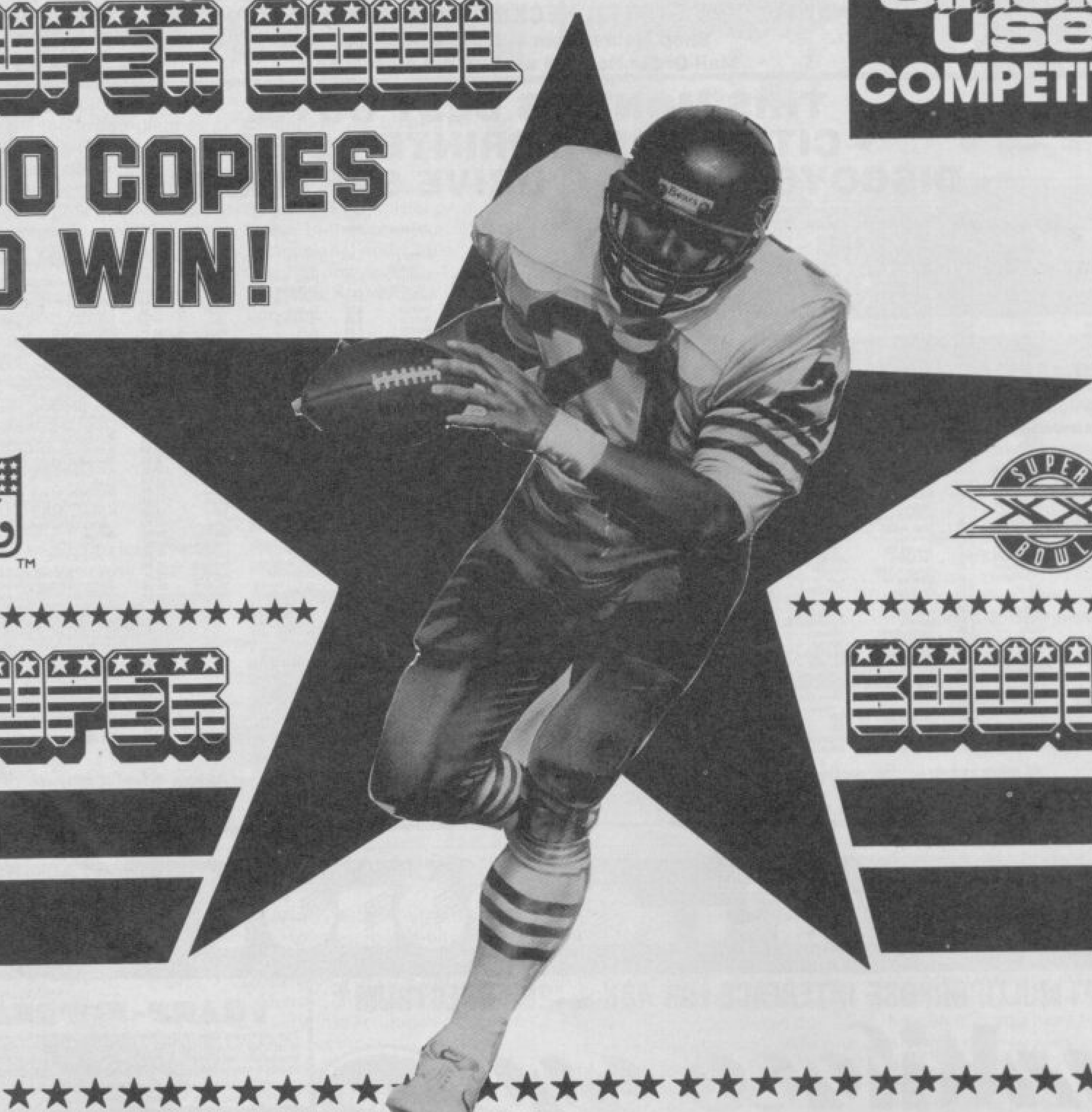
● *In answer to your pleas, Darren, we have printed maps of* **Rambo** *and* **Movie.** *And we want to print more. So get cracking and send us in detailed maps of any games you've completed — especially those of recent releases.*

And if you've mapped out a new game, or found a Sneaky Poke, or have some new hints to games that haven't been printed in any other magazine, you could win a smashing Sinclair User *Zapchat T-shirt. Yes, these exclusive garments will make you the envy of your friends, and we will be giving away five each month.*

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100 COPIES TO WIN!



SUPER BOWL

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Will it be a 'fly flicker' to your star running back or a long bomb to the fleet-footed wide receiver.

The clock's ticking as you break from the huddle.

HUT 22 HUT 64 HUT...

Hold... it, what is this man talking about?

Sorry, got a bit carried away there.

You may be one of the few people who has never stared into the face mask of an 18 stone nose tackle or pirouetted past a flat-footed tackle. If so Super Bowl from Ocean is just the game for you. All the fun of America's greatest sporting razzamatazz without the hospital bills.

It just so happens that we have 100 copies to give away if you answer these five simple questions:

1. Which team won the 1985/86 Super Bowl?
   (a) Chicago Bears (b) Washington Redskins
   (c) Lenningrad All Stars
2. Which of these English commentators once played for the New England Patriots?
   (a) Nicky Horne (b) John Smith (c) Murray Walker
3. Which of these is the odd one out?
   (a) Seattle Seahawks (b) Los Angeles Raiders
   (c) New York Mets
4. Which one of these is the nickname of a well known Chicago Bear?
   (a) The Kitchen Sink (b) The Refrigerator
   (c) The Oven
5. Which running back, still playing has run for more yards than any other player in the history of the NFL?
   (a) Marcus Allen (b) Walter Payton (c) Skip Austin

Just fill in a postcard with your five answers and send it to us at: Super Bowl Competition, Sinclair User, 30-32 Farringdon Lane, London EC1R 3AU, no later than Friday June 6. We'll be sending copies of Super Bowl for the Spectrum to the first 100 pulled out of the hat.

EMAP Fortyeighters and Ocean employees are not allowed to enter.



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Please send me details of The Multiface Interface. Please tick box ☐

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SuperSpectrum!

Amstrad has Sinclair's secret weapon — the £200 SuperSpectrum. It's everything the Amiga should have been

At the time of the Amstrad deal Sinclair was well advanced with development plans for a new Spectrum micro — the SuperSpectrum — and *Sinclair User* has now uncovered the full details.

Designed to replace the Spectrum 128 at under £200, the SuperSpectrum — codenamed 'Loki' after the Norse 'gamesplayer' God — is an entertainment software computer with graphics and sound the likes of which have never been seen even at five times the price.

Inspiration for the SuperSpectrum undoubtedly comes from Commodore's incredible Amiga machine. The key to the startling power of the SuperSpectrum — as with the Amiga — lies in its special custom chips. The SuperSpectrum has two sophisticated chips handling the video screen (Rasterop device) and sound synthesis, both with direct memory access. This gives the machine the potential to produce incredibly fast 3D graphics manipulations and sound of hi-fi quality.

But where the Amiga costs over £1,500, the SuperSpectrum will scrape in under £200.

The trick is that the SuperSpectrum is still an 8-bit machine. In fact, it even has a Spectrum 48K compatible mode if you want it. The processor it uses is a special up-rated version of the old Spectrum's Z80A. Called the Z80H, the new chip runs twice as fast, at an incredible 7 MHz. At this speed there is time to provide a fast interrupt handler that keeps pace with the video display, still leaving time to run programs faster than the Spectrum 48.

But the real power of the micro comes from the two custom chips. Because they have direct access to the memory, during time which would otherwise be wasted, large amounts of screen data can be moved about at speeds that the CPU couldn't manage, even if it had nothing else to do.

To match the CPU, fast-access Ram is required, and the SuperSpectrum will be equipped with two 64K banks each made up of two 256K-bit chips. One bank will be connected to both the CPU and custom-built Rasterop video hardware and will normally hold the video information and sound waveform tables. Bank switching is required to enable the 16-bit address bus access to all the Ram. A 4-bit system allows a total address space of 1Mbyte. At least two banks will be occupied by Roms but the rest can be fitted with Ram expansion.

The display quality relies on using a 53Kbyte video Ram table. Even at 7Mhz a Z80 could not manipulate this amount of data quickly enough to give reasonable animation, so the custom-designed graphics Rasterop device is essential. It tranfers 8-bit data in the video area from one address to another, and in the process can carry out logical functions using data from the destination and source addresses and its own masking registers. Animation and selective screen scrolling becomes an automatic process with the CPU only sending a few instructions during each line interrupt.

Another idea taken from the Amiga is line drawing hardware — the SuperSpectrum will be capable of remarkable 3D wire-frame graphics. The screen mode that will produce the best games has a 256 by 212 pixel resolution and 64 colours. A single byte is used for each pixel, leaving two bits spare for the Rasterop chip to use for Bobs (blitter objects) that give sprite-like animation and collision detection for multi-coloured graphic shapes.

The same principle of Ram sharing will allow sound synthesis of a high quality as waveforms are stored in memory. Sound output, produced by an 8-bit digital to analogue converter, can be heard through a TV speaker, stereo headphones or fed into a hi-fi system. An optional sound sampler will allow you to 'record' any sound that has a pitch and use it as a musical voice. A music keyboard for the SuperSpectrum will be available as an add-on.

While it's easy to be blinded by the SuperSpectrum's startling graphics and sound qualities there are two other features which could be just as important to the machine's success.

Although the SuperSpectrum will support cassettes — and Amstrad may well build a cassette player into the main box — Softcards could become the new medium for program storage. These credit card size Rom cards can hold a program up to 1Mbyte in size and they are cheap to manufacture.

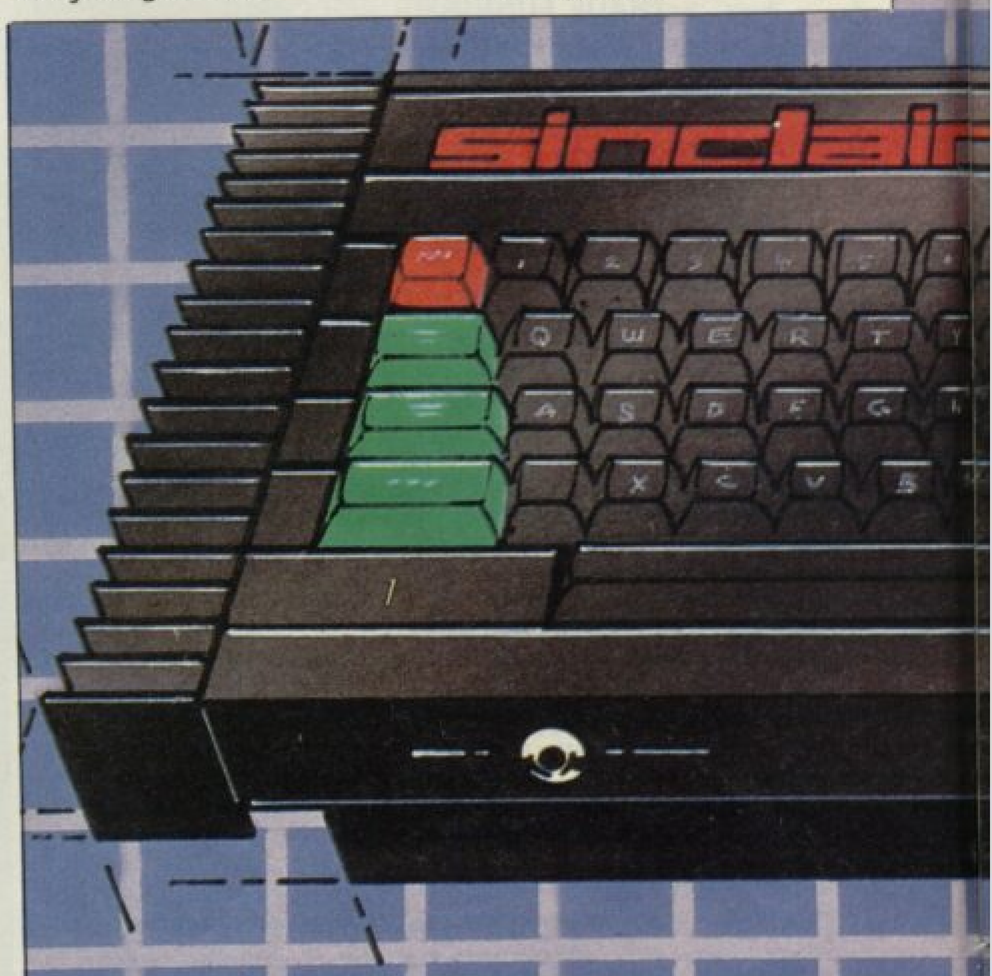
The other feature which may attract Amstrad to the SuperSpectrum is the built-in CP/M operating system — add a controller and disc drive and the SuperSpectrum fits neatly into the Amstrad range, running the same utilities as the Amstrad CPC and PCW computers.

To give an idea of what might be achievable with the SuperSpectrum take a look at what the Amiga can do. Nearly everyone who has seen an Amiga has had to completely rethink their expectations of other machines. It can perform lightening fast solid 3D tumbling, animation approaching true cartoon quality and produce digitally sampled sound — real voices, real jet engine roar.

The SuperSpectrum won't equal the Amiga for speed but it will come pretty close, and be able to produce very similar effects at a fraction of the cost.

The big question is: Will Amstrad market the SuperSpectrum now they have the rights to it?

They'd be crazy not to. With the Sinclair technology and Amstrad's marketing the SuperSpectrum — Loki 'the gamesplayer' — would take the world by storm.



Keyboard

One feature that will mark out the SuperSpectrum as different from every Sinclair micro before, will be a keyboard suitable for the fastest of typists. With word-processing such a major attraction to people who would not consider buying a computer for games, a good keyboard is essential. Another change will be the lack of keyword legends associated with 48K Spectrum Basic. The Basic is a development of the QL's SuperBasic and additional method of entering information will be via a light pen, supplied as standard.

Memory

In standard form there will be 128K of Ram. With half of it taken up by video and sound bit maps this may not seem too generous, but bank switching is provided to allow expansion.

It is intended that most software will be stored in Rom — up to 1Mbyte on special softcards — leaving plenty of free Ram for workspace. SuperBasic, text, animation graphics, sound and music editors as well as CP/M will be built-in, and the SuperSpectrum Softcard Rom slot will also be standard, giving instant program loading for users and piracy protection for software houses.

Z80H microprocessor

Sinclair computers before and after the QL have used the Zilog Z80A CPU, triggered by clock pulses to run at 3.5 MHz. The Z80H allows the SuperSpectrum to run at 7MHz so that all processing functions run in half the time, whether they are number crunching, data handling or screen printing.

The additional speed not only means faster programs — a powerful interrupt facility will keep pace with the screen display without slowing down the CPU to any appreciable extent. Games programmers will delight in being able to change screen mode on every line of the display.

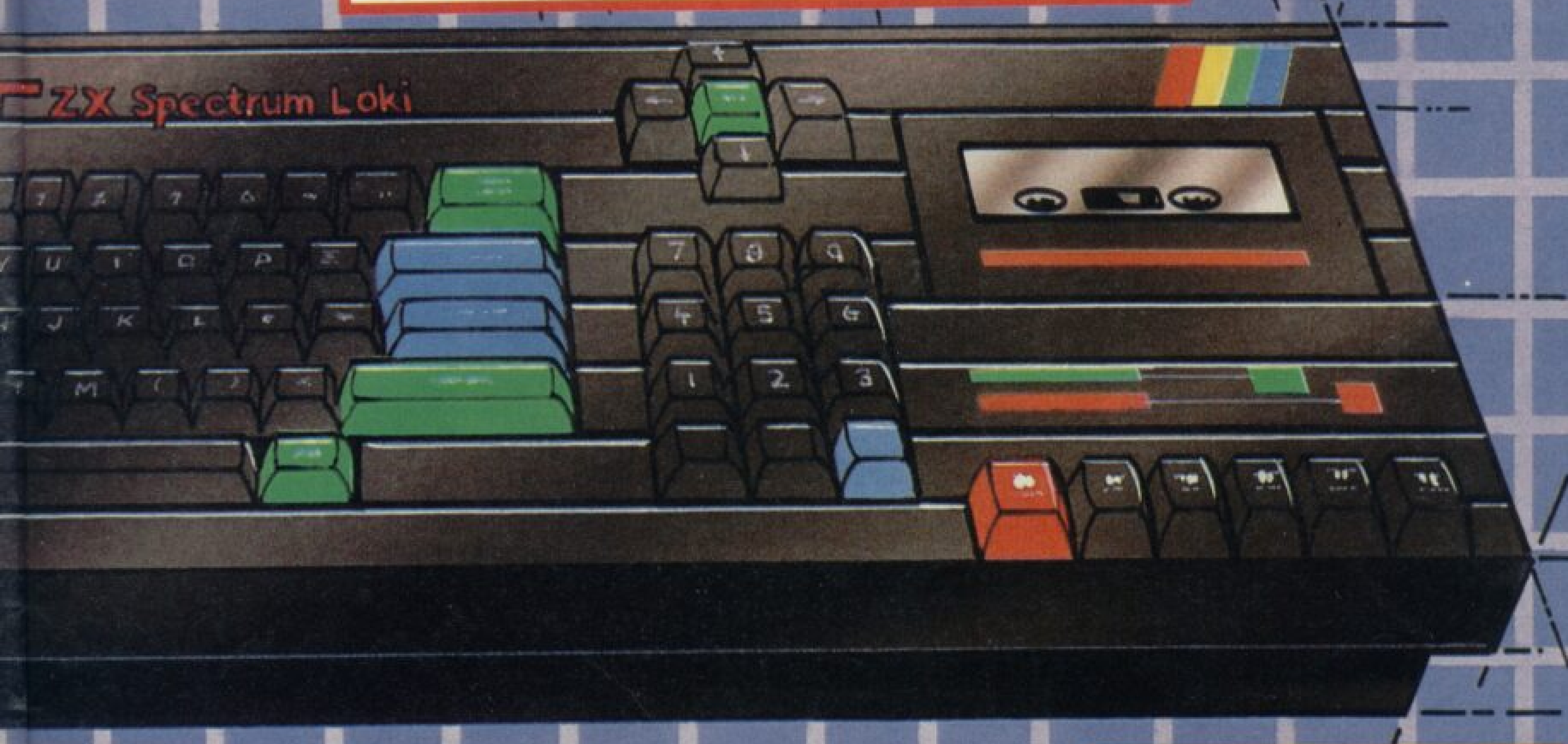
Sound generation

Rather than rely on a standard sound chip, the SuperSpectrum will have custom-built synthesiser hardware, so it won't sound like any other computer, Amiga excepted. What it will sound like is a Fairlight synth — in other words, virtually anything you want. Waveforms are held in Ram and read out at various speeds with filtering and envelope control. There will also be a Midi interface, stereo inputs and outputs (Walkman style) and built-in music composing software.

Input and output

The list of connections to the new machine is very impressive. A fully buffered Z80 expansion bus, RGB, composite and TV video, floppy disc, serial printer, twin joystick, light pen, network and cassette ports should keep most people happy. Specialists will welcome the Midi In, Out and Thru and stereo sound input, output and Walkman-type headphone interfaces. Also the genlock input which will lock the SuperSpectrum's video hardware to video recorders, Laservision optical disc players and a frame grabber. The light pen is fitted as standard.

Peripherals options include floppy disc drive, music keyboard and Ram expansions. Hard disc, compact disc optical Rom drive, mouse, modem and audio and video grabbers are also supported.



Video display

If you think that some remarkable effects have been achieved on the Spectrum screen, you've seen nothing yet — the SuperSpectrum can rival the state-of-the-art graphics handling of the Amiga. With nearly six times more memory devoted to video Ram, the display has the same horizontal resolution as a QL (512 pixels) — but 16 colours are available! Cut the number of pixels per line to 256 and you have two options: 256 colours, or 64 colours and four sprite planes. To handle this vast potential, custom graphics, blitter technology in the form of custom graphics handling, sprite and collision detection hardware — the Rasterop chip (similar to the Amiga's blitter chip) will be built in. This can access the screen Ram directly, so graphic operations can be performed very quickly. Rasterop will also contain a light-pen interface.

Spectrum compatible

The machine will be Spectrum 48 compatible. Inside the SuperSpectrum will be faithful copies of the old Roms. The video hardware can switch to the old format and the CPU clock will slow down to 3.5Mhz. With the same cassette interface available, it seems likely then that a high proportion of Spectrum software will run in a special compatible mode which can be selected. You will not be able to write Spectrum Basic programs as the old Basic Rom will be hidden from the user (do you want to write half-speed programs?) though programs which use it will be able to access it when loaded. What may concern some people wil be the lack of a Microdrive interface. Microdrives it would seem are well out of favour. Also there are no plans to include the sound chip from the 128, so true 128 compatibility seems unlikely.

Artist impression

TOOLKIT SURVEY

Supercode III

This big daddy of toolkit utilities has been up-dated several times and now contains 152 machine-code routines which can be used in direct input mode or from within your own programs.

There are nine types of routine covering graphics output, sound, program manipulation, the handling of peripherals and general utilities such as *Memory Block Insert*.

Screen scrolling effects are achieved by pixel and character movement. A pixel is smaller than a character and so pixel scrolling — in one of four directions — is slower but less jerky than character scrolling. Scrolling can leave the attributes in place but these can also be scrolled by using other routines within the package.

Two other scrolling effects are available through **Supercode** but they require a great deal of effort to use. The ripple effect turns a character about on its axis — using a pixel move — so that, for instance, you could reverse all the characters in a message to turn those characters upside down. The shutter effect, which also uses pixel manipulation, moves characters out of their squares, either to the left or right. The two routines work only on individual characters and if you have a long message which you want to scroll or rotate you will have to use the commands for every letter in that message.

Simple graphics can also be moved around the screen. You can set up a box and scroll it, pixel by pixel, left or right across the screen. The box must be smaller than one third of the screen and must not overlap into the next section by even one pixel.

To set up a box you need to do a fair amount of *Pokeing* and, if you're not sure about putting *Pokes* into programs, the two box routines are best left alone. You have, however, another 150 routines to use so don't be put off.

Screen effects are not just limited to scrolling. You can fill displays with text, store screens above Ramtop, switch them on to the display to create animation effects, change *Ink* colours and backgrounds without using *Cls* and switch *Flash* on, again without having to use *Cls* to re-set the attributes.

The *Screen Fill* routine takes advantage of the box creation facility. You set up a box on the display and can then fill it with a specific character. The routine requires you to enter four *Poke* instructions and a *Print At*. This may seem excessive — when toolkits are supposed to take the hard work out of programming — but all you need know are the box dimensions, the code of the character you want to use as filling and the screen co-ordinates of the top left-hand corner of the box.

The toolkit can be used to produce full-screen animation effects by storing several screens above Ramtop and then the overprinting and exchanging commands within a program. The result is you can almost instantaneously switch displays on the screen.

You can also invert the colours of a screen — so that *Ink* becomes *Paper* and *Paper* become *Ink* — and merge the graphics on two screens into one. The package will also compress screens into the smallest amount of memory.

Some spectacular effects can be achieved using the toolkit's sound digitising facilities. As well as being able to compose sound which is seemingly made up from several simultaneously played notes you can take a piece of music from your hi-fi, put it into the Spectrum memory and replay if using a **Supercode** command. You can only record five to 10 seconds of sound for playback — because of memory restrictions — but the results are astounding, especially when played back in Basic programs.

For those of you into graphics effects **Supercode** provides a variety of science-fiction style character sets, crazy border effects which are very colourful and *Paint Fill*, which will colour a closed line object. A series of Rom-based routines are used within the package to produce stars and rings to order.

On more mundane ground the package contains a block of routines which are useful when you're writing Basic programs. They include two *Renumber* routines. The first does not renumber *Goto* or *Gosub* statements, the other does. *Super Renumber* also displays a list of calculated and non-integer *Gosub* and *Goto* line numbers which have to be altered by hand.

A *Trace* facility helps display the numbers of lines as the computer runs the program. Variable and string list facilities will help you track down errors by displaying the contents of set strings and variables after the program has been run. If errors crop up in strings a *Replace* routine can be used to change the characters within them.

One of the most useful routines within the program manipulation commands is *Append*. Remember the times when your program contained a long line of code made up of seemingly endless statements? Remember how that line had an error in it right at the end and you had to track the cursor right to the end before making the correction? *Append* will position the cursor at the end of a specified line and cut back on the time wasting and irritation.

When you've corrected your precious Basic program, using the wide variety of *Renumber*, string manipulation and error tracking features of **Supercode**, you will want to protect it from pirates and the package even includes routines to make your program more secure.

Four routines make your program disappear — using a Sinclair Rom-based routine will destroy the program if the *Break* key is pressed and will auto-run the code. An anti-*Merge* routine is also included. As you may know, *Merging* a piece of auto-run Basic into the Spectrum will stop it from running. The anti-*Merge* facility makes sure your program is auto-run, whichever way it is loaded.

Version three of **Supercode** has been up-dated to include Microdrive facilities. If you are worried about the Amstrad takeover, you can be thankful that at least one company is taking the mass storage device seriously. If you think your Microdrive is on the blink you can run the diagnosis routine which will output an error message if



Graphics Machine

McGraw Hill's **Graphics Machine** is not just another games designer. It provides a set of machine-code routines which produce effects of equivalent quality to those you'd expect to find in professionally written games.

Sprite manipulation is the major attraction of the package giving one method of sprite definition and movement for Basic programmers and two for machine coders.

The **Graphics Machine** replaces the Spectrum Rom routines and you can use all 24 lines of the screen, rather than the 22 lines which the Spectrum Rom allows. The replacement routines include *Attr, Circle, Cls, Draw, Plot* and *Inkey$*. All of them are much faster than their corresponding Rom routines.

Each extension is switched in with the Spectrum *Usr* command in the a variety of guises. Some require parameters which must be *Poked* into Ram.

The **Games Machine** also contains a set of utilities which can be used to create arcade games. Several, such as that which finds a screen address from an *X-Y* set of co-ordinates, are for use in machine-code programs which treat the screen in terms of pixels rather than characters.

Those routines which can be used from within Basic include a selection of sound effects (which can range from **Space Invader** beep to white noise) a facility which puts a new set of attributes on the screen without the use of *Cls* and a series of every-which-way screen scrolls (which the author of the package insists on calling window rolls).

The chunky 132-page book which accompanies the software gives details of how each routine works, together with a dissassembly of the utility. The disassembly is there to take the mystery out of the package's operation for the Basic programmer and enable the machine-code programmer to take better advantage of the routines, maybe even by improving or adding to them.

You can build up sprites. These are blocks of character squares on screen which are moved together to create a larger figure. For instance a sprite could consist of a three characters by three characters square block. The pixels within this block represent the canvas on which the programmer draws an image. Most arcade games use sprites to create walking figures or whirling spaceships.

the device is not connected. The error can be picked up by the package's *Onerr* extension and a suitable warning can be output to the user of your program without generating a crash.

If you were initially annoyed at the inflexibility of Microdrive file handling you can get **Supercode** to mimic random access file handling. You can decide where you want your information to be stored on a cartridge to set up data files which can be accessed, in theory, in a faster time than normal.

The RS-232 channel is not left out. The package will automatically set up a channel between devices and send and receive information in byte form. It will also set up the network so that you can send packets of information from one ZX interface to another.

There are too many facilities in **Supercode** to mention them all. Those I have mentioned are the highlights of a unique and powerful package. There is nothing else like **Supercode** on the market and I recommend it.

The package has been around for more than two years but CP Software is constantly updating it. Many of the routines require a little work to get them into Basic programs but the spectacular results and savings in time and effort make this package without rival.

John Gilbert

Publisher CP Software
Price £9.95
Programmer Deep Thought Software
Memory 48K
★★★★★

Master Tool Kit

Basic programming may not be impossible to do but when you have a program which is several hundred lines long you begin to need some way of keeping track of it.

The **Master Tool Kit**, from OCP, has been around for more than a year but remains one of the best ways to stay in control of Basic programs while you are writing them.

The package is compatible with the Spectrum Plus and 16K Spectrum but will not run on the 128.

The toolkit includes a number of global commands which show the operational state of the Spectrum and generally make things easier for the programmer.

The package is toggled into operation using *Symbol Shift* and *Space* but you must write your program and load it into memory before you invoke the toolkit. The normal keywords are not freely available from the utility and you cannot edit programs when it is in operation.

A real-time digital alarm clock can be put at the top of the screen.

Free Memory provides the number of bytes free in user-Ram but excludes memory under Spectrum control such as the UDG area and screen area which you could use by *Pokeing* in a program.

Once you've got used to those system commands you can start to manipulate the lines in your Basic program. To list them you can type *Cls* as single letters and then *'L'* in upper or lower case. Lines can be manipulated singly or in blocks. A statement such as 'L 100' would list Line 100 but the statement 'L10-100' would list all the lines between 10 and 100. If the qualifier is ommitted the effect of the command is applied to the whole program. All the tool-kit commands — which include *Renumber, Delete, Merge, Move, Copy* and *Trace* — act in the same way.

Renumber affects a block of



lines or, where range is not stated, the whole program. It requires a start line number and an increment value. For instance, the start might be 10 and the increment 5 so the routine would renumber the lines as 10, 15, 20 . . . The final line number of your program must be equal to or less than 9999 when the renumber finishes. If the number is over the limit the process aborts and a 'Line Number Overflow' message appears.

You can also *Delete, Move* and *Copy* blocks or single lines. *Move* involves taking lines from a specified range and moving them to a target area within the program. If there is not enough room between two target lines an error message is generated.

Copy is similar to *Move* but the lines which are copied are not deleted from their source. For instance, if lines 10, 20 and 30 were copied as Lines 50, 60 and 70 the original lines are not scrapped.

Program statements can be squashed into the minimum number of lines through the use of the *Merge* and *Pack* commands. *Merge* takes the statements in two lines and compresses them into one. The *Pack* command is more versatile. It can be used to compress the statements in a block — or the whole program — into fewer lines. Both commands are useful if you are trying to save memory space.

The toolkit will also manipulate strings within lines. It will change upper to lower case — and vice versa — find occurances of a specified string within a program and replace it with another string if required.

When you have finished writing your Basic program there is a 99 per cent chance of it being bugged. The toolkit has routines to handle even that eventuality.

A *Trace* facility can be switched on to show up any errors in program structure during a run. When you run the program the number of each line is displayed on the screen as it is executed. You can then see if the program has gone into an endless loop or contains loop definitions without *Next* endings.

When *Trace* gets you nowhere switch on the toolkit's variables monitor. It will print out the variables within a program — numeric, string and array — as they are defined and you can sort out any undefined variables.

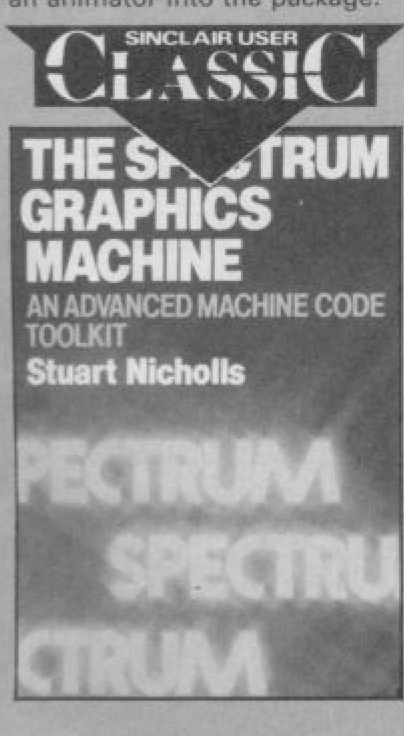
If you find a potential trouble spot you can set a break point within a program by issuing an instruction that if a specific error occurs the program should not stop but control should be diverted to a specific line where the error can be handled.

The **Master Tool Kit** covers all the basics of program design and debugging but OCP has also included 10 user-definable function keys rather like those you find on the QL, Amstrad and Commodore computers.

Associated with each key is a string of characters which make up a command such as *Run, List* or *Load*. When you press the key the command comes on to the screen and can then be executed using *Enter*. You can

▶ 30

The **Graphics Machine's** sprites move across the screen two pixels at a time. To cover up the screen flicker caused in this process McGraw-Hill has built an animator into the package.



Animation is achieved by using four sprite grids. The start position of the character is mapped out on the first sprite grid while the other four show progressions of the action. When these static images are flicked on to the screen one after the other the character seems to come to life.

The sprite data, for each of the sprite grids, is set up as a series of UDGs within a Basic program.

Routines within the **Graphics Machine** set up a group of systems variables which indicate where the sprites are to be put on to the screen and update the positions to create the effect of movement.

Most of the work when producing a sprite is to create the data for the images and then *Poke* them into Line 1 of your Basic program. The **Games Machine** code has the advantage that it can also be loaded from within that listing.

Sprite animation using the package is not easy and you will need to be a competant programmer to handle it. However, there are some additional help facilities which you can call from within your programs.

McGraw-Hill rightly claims that this package is a comprehensive graphics toolkit to enable machine-code programmers to brush up on their arcade game-writing techniques and to help Basic programmers to produce some astounding effects.

It is a shame that the **Graphics Machine** is not as well known as the art packages from Rainbird and Softechnics.

Every competent programmer who wants to try writing arcade games should have a copy.

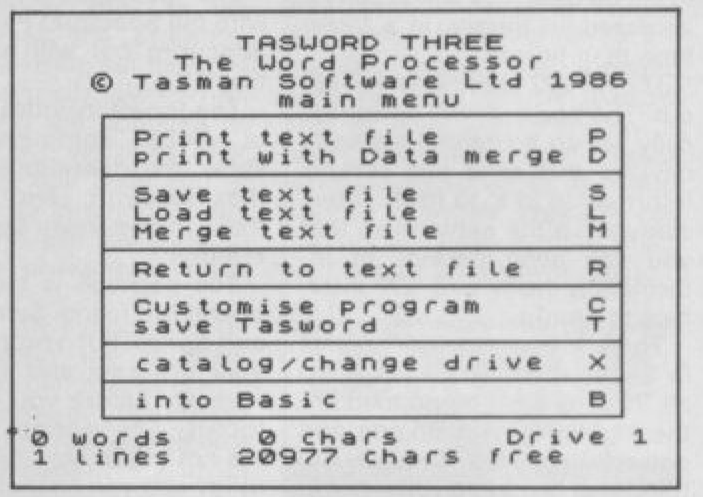
John Gilbert

Publisher McGraw-Hill
Price £13.95
Programmer Stuart Nicholls
Memory 48K
★★★★★

TASWOR

THE WORD PROCESSOR – A NEW STANDARD FOR THE







TASWORD TWO led the way in setting a standard for word processing on the ZX Spectrum. TASWORD THREE pioneers the new standard.

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ZX SPECTRUM
TASWORD TWO
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"Without doubt the best utility I have reviewed for the Spectrum"
HOME COMPUTING WEEKLY APRIL 1984
"If you have been looking for a word processor, then look no further" CRASH JUNE 1984
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TASPRINT
THE STYLE WRITER

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A must for dot matrix printer owners! Print your program output and listings in a choice of five impressive print styles. TASPRINT utilises the graphics capabilities of dot matrix printers to form, with a double pass of the printhead, output in a range of five fonts varying from the futuristic Data-Run to the hand writing simulation of Palace Script. A TASPRINT gives your output originality and style! The TASPRINT fonts are shown to the right together with a list of compatible printers.

TASCOPY
THE SCREEN COPIER

TASCOPY for the ZX Spectrum with Interface 1 cassette £9.90 microdrive cartridge £11.40

The Spectrum TASCOPY is for use with the RS232 output on ZX Interface 1. It produces both monochrome (in a choice of two sizes) and large copies in which the different screen colours are printed as different shades. With TASCOPY you can keep a permanent and impressive record of your screen pictures and diagrams. A list of printers supported by TASCOPY is given to the left.

TAS-DIARY
THE ELECTRONIC DIARY

TAS-DIARY for the ZX 48K Spectrum and microdrives. Cassette £9.90

Keep an electronic day-to-day diary on microdrive! TAS-DIARY includes a clock, calendar, and a separate screen display for every day of the year. Invaluable for reminders, appointments, and for keeping a record of your day. The data for each month is stored as a separate microdrive file so that your data for a year is only constrained by the microdrive capacity. TAS-DIARY will work for this year, next year, and every year up to 2100! Supplied on cassette for automatic transfer to microdrive.

TASMAN PRINTER
INTERFACE

TASPRINT PRINTER INTERFACE for the ZX Spectrum £29.90
RS232 Cable for ZX Interface 1 £14.50

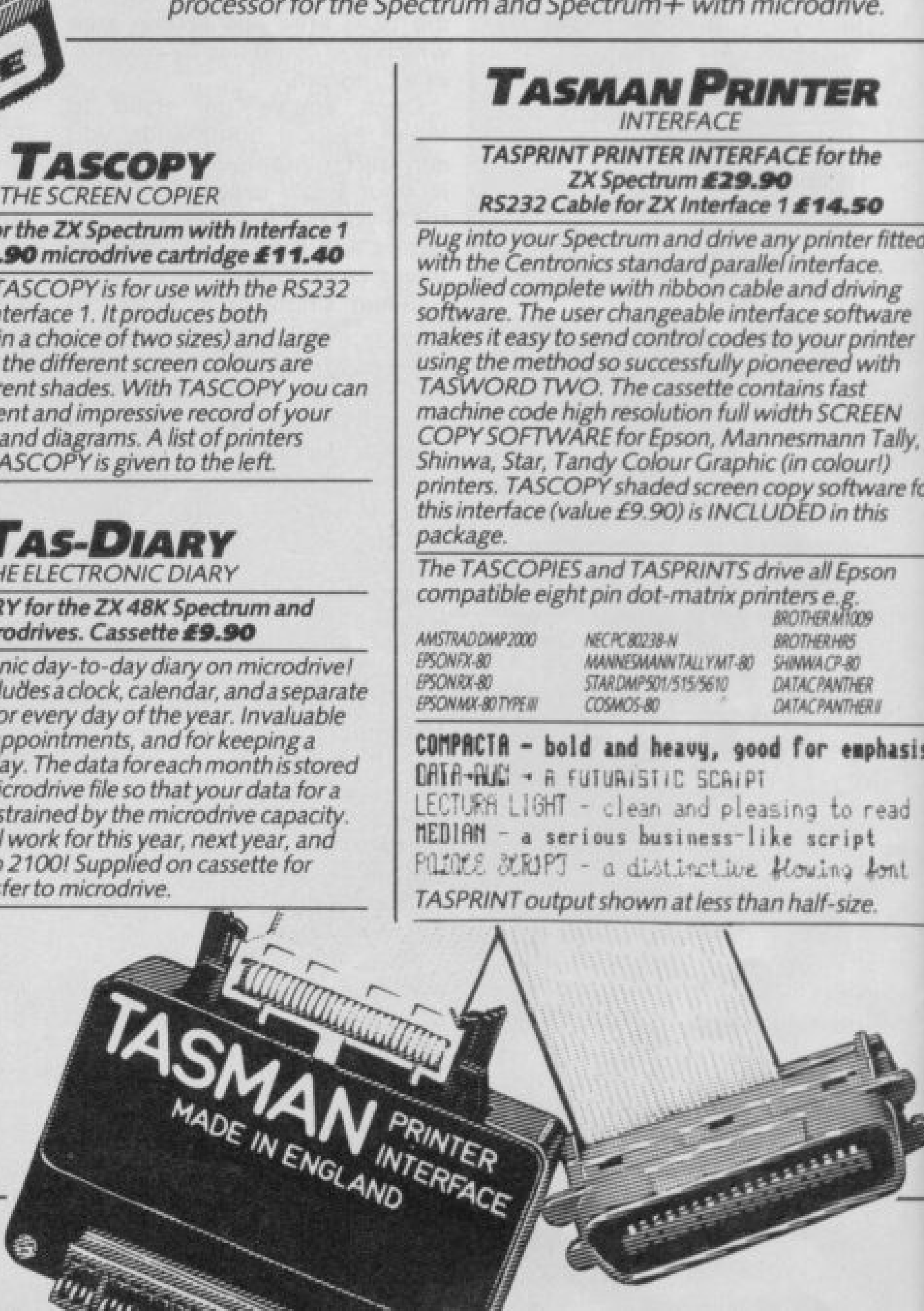
Plug into your Spectrum and drive any printer fitted with the Centronics standard parallel interface. Supplied complete with ribbon cable and driving software. The user changeable interface software makes it easy to send control codes to your printer using the method so successfully pioneered with TASWORD TWO. The cassette contains fast machine code high resolution full width SCREEN COPY SOFTWARE for Epson, Mannesmann Tally, Shinwa, Star, Tandy Colour Graphic (in colour!) printers. TASCOPY shaded screen copy software for this interface (value £9.90) is INCLUDED in this package.

The TASCOPIES and TASPRINTS drive all Epson compatible eight pin dot-matrix printers e.g.

AMSTRAD DMP 2000	NEC PC 8023B-N	BROTHER M1009
EPSON FX-80	MANNESMANN TALLY MT-80	BROTHER HR5
EPSON RX-80	STAR DMP 501/515/5610	SHINWA CP-80
EPSON MX-80 TYPE III	COSMOS-80	DATAC PANTHER
		DATAC PANTHER II

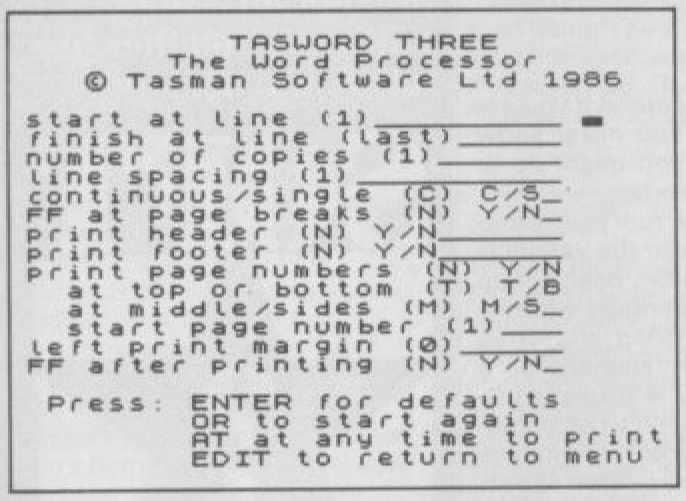
COMPACTA - bold and heavy, good for emphasis
DATA-RUN - A FUTURISTIC SCRIPT
LECTURA LIGHT - clean and pleasing to read
MEDIAN - a serious business-like script
PALACE SCRIPT - a distinctive flowing font

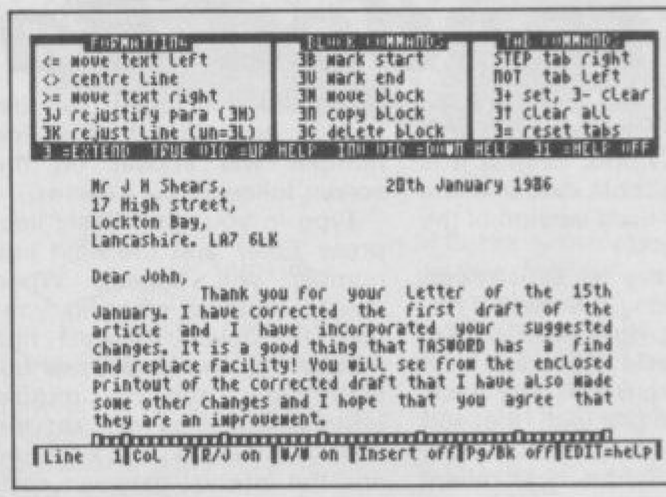
TASPRINT output shown at less than half-size.



RD THREE

E ZX SPECTRUM AND ZX SPECTRUM+ WITH MICRODRIVE





Please note that TASWORD THREE is only supplied on, and will only run on, microdrive.

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Available from good software stockists and direct from Tasman Software, Springfield House, Hyde Terrace, Leeds LS2 9LN. Tel: (0532) 438301

TASWIDE
THE SCREEN STRETCHER

TASWIDE for the ZX 48K Spectrum cassette £5.50

With this machine code utility you can write your own Basic programs that will, with normal PRINT statements, print onto the screen in the compact lettering used by TASWORD TWO. With TASWIDE you can double the information shown on the screen!

ZX SPECTRUM 128
TASWORD 128
THE WORD PROCESSOR

TASWORD 128 for the ZX Spectrum 128 cassette £19.95

TASWORD 128 has been especially developed to use the additional memory of the 128K Spectrum. This gives text files that are over 60K long – this is about ten thousand words! TASWORD 128 has all the features of TASWORD THREE (mail merge only when transferred to microdrive). TASWORD 128 is supplied on, and will run on, cassette. TASWORD 128 is also readily transferred to microdrive by following instructions supplied with the program.

SINCLAIR QL
QL is a trademark of Sinclair Research Ltd

TASCOPY QL
THE SCREEN COPIER

TASCOPY QL for the Sinclair QL microdrive cartridge £12.90

TASCOPY QL adds new commands to QL Superbasic. Execute these commands to print a shaded copy of the screen. Print the entire screen or just a specified window. TASCOPY QL also produces large "poster size" screen copies on more than one sheet of paper which can be cut and joined to make the poster.

TASPRINT QL
THE STYLE WRITER

TASPRINT QL for the Sinclair QL microdrive cartridge £19.95

TASPRINT QL includes a screen editor used to modify files created by other programs, such as QUILL, or by the user from Basic. These modified files include TASPRINT control characters and may be printed, using TASPRINT, in one or more of the unique TASPRINT fonts.

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set up the keys with your most frequently used commands to make programming even easier.

The toolkit is easy to use and will be of greatest interest to the more experienced Basic programmers. Nevertheless it could have been still easier to use if you didn't have to toggle out of the toolkit every time you want to *Run* or *Edit* your program.

Finally, OCP has included a UDG generator — as a separate program — for those who want to put graphics into their Basic programs. The characters are designed using a grid on to which a flashing cursor can drop ink or wipe it out. As the character is created the numeric values of each of the grid rows are displayed in hexidecimal and can be set up in programs using *Data* statements. You can also store graphics characters which can be loaded straight into the UDG area of Ram at a later occasion.

The new commands, combined with the UDG generator, make **The Master Tool Kit** a very attractive package. It fulfills most people's Basic requirements and makes handling long complicated programs a lot easier. *John Gilbert*

Publisher OCP
Price £9.95
Programmer James Hutchby
Memory 16/48K
★★★★★

Extended Basic

ZX Basic is regarded as one of the best Basic variants in the world. Even if it is slow, it is almost certainly the most widely used version of the language.

It does have its deficiences, though, which CP Software has tried to put right with its **Extended Basic** package of keyword extensions. The package, compatible with the 48K Spectrum only provides extra commands which are meant mostly for direct input rather than for use within programs.

Extended Basic is loaded in the same fashion as a Basic program and the new keywords it gives are implemented using an astrisk as a prefix to each command. For instance, commands include **Clock*, **Delete* and **Trace*. CP has also retained the single key-word entry system, made famous by Sinclair. Just enter the * and the first letter of the command.

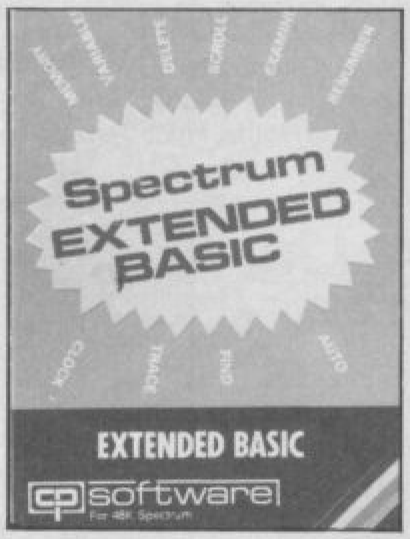
There are 10 commands, most of which are used for Basic error trapping, but the package also includes the statutory digital clock. The clock — displayed permanently on-screen when the program is running — is activated by typing C1 and can be set by following the Clock command with a starting time in hours, minutes and seconds.

If you keep losing programs you have on tape by forgetting their identity the *Examine* command will scan the tape for their file headers. The computer sets up for a normal load, you start the tape and when the header is read the information stored in it, which includes file name, file type — program or code — and length in bytes is displayed.

Once the Basic program is in memory you can check the machine's memory status. The read-out gives the address of Ramtop, the number of bytes used by your program and variables, together with the amount of free Ram. CP's extension package occupies less than 5K of Ram leaving approximately 36K to play with when the machine is initialised.

An automatic line numbering command is included. You just type in *Auto* and the first line number will appear on the screen followed by a cursor.

Type in your first Basic line, press *Enter* and the next line number will appear. When you've finished entering your program delete the last line number which has popped up, type *Enter* and the routine switches off. You can set the start number of the auto-line and the interval between each number by putting two parameters after the command. For instance, **Auto* 10, 5 numbers a program from 10 in jumps of five.



Another annoying trait of the Spectrum that CP's package takes care of is the 'Scroll?' message you get after more than 22 lines have been displayed. You can suppress the 'Scroll?' message and produce a continuous scrolling motion when you list your programs by activating the package's continuous scroll routine. Once it's in operation you won't have to press *Enter* to scroll anymore.

The remaining commands deal with error trapping. *Trace* shows line numbers of a program as it is being run and slows down the execution of the code by a factor of approximately 20. The *Trace* display replaces that of the clock and shows the line and statement numbers as they are scanned.

The effects of your program, such as screen printing, are not affected by the *Trace* facility but you should be careful if you are using *Pokes*: You never know what damage you might do to the package's code.

When you've run your program you can scan the variables area to see they've been set up properly. The package will display numeric string and array variables. Each element of a numberic array is displayed — even if you haven't put something in it — but only the names of string arrays are shown together with a quotation mark to show that they contain strings.

A trace facility also exists to track specific strings within variables and *Print* statements. The *Find* command is followed by the string you want to find which is inclosed within square brackets. The computer then finds and displays the line which contains the string. Unfortunately, it only finds the string the first time it appears but you start the *Find* trace anywhere within the program.

Once you've fiddled around with your program and are confident that all the bugs have gone you can re-number it. The package provides a flexible and easy-to-use routine which requires two parameters: the start line number and the interval. It would be even better if you could re-number specific parts of a program.

All Basic extensions run interactively with your programs allowing you to run and list programs without having to toggle in and out of the toolkit.

It is not tremendous value for money. It provides only 10 new commands. Compare that with the thirty or so error trapping routines in a package like **Beta Basic**, which costs only a little more. Alternatively the OCP **Master Tool Kit** offers more routines and a UDG generator.

Cut the price of this package in half and it would be excellent. *John Gilbert*

Publisher CP Software
Price £9.95
Memory 48K
★★★

STAR RATINGS

All software reviews carry a star rating, the basis of which is value for money. Programming, graphics, speed, speech and sound on 128K games, presentation and addictive qualities are taken into account

SOFT ? WARE

★★★★★
Solid gold. Buy it

★★★★
Well worth the folding stuff

★★★
Pretty average. Buy if desperate

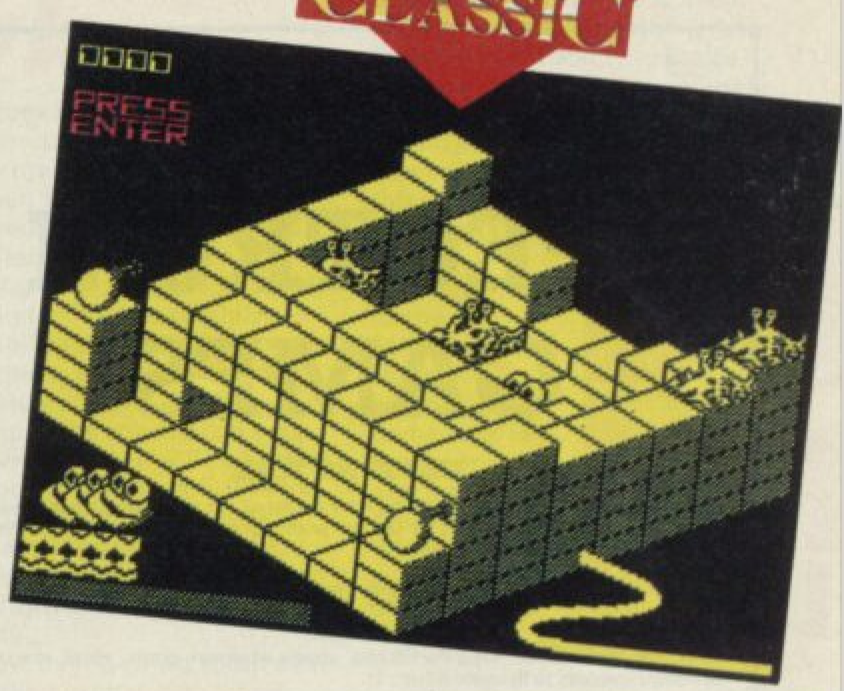
★★
Very poor. Probably over-priced too

★
A total rip-off. Complain loudly

NEW FEATURE

We start a new section this month: Software Preview Four pages of pre-release info begins on page 88!

Kirel



Addictive games is best known for **Football Manager** — a game so intrinsically well designed that it has been converted to every machine under the sun and is still (several years later) the most successful management game ever. Although Addictive has released other games over the years none have had anything like the success of **Manager.** Now it hopes to change all that with **Kirel**.

Kirel looks, in its use of an edge-on 3D viewpoint, a little like **Knight Lore** and **Alien 8**. Were **Kirel** actually like those games it would of course be exceptionally tedious. Enough is enough. But despite the wizzo graphics you could argue that **Kirel** is barely an arcade game at all, or at least say that the skills it requires are quite different from the usual dodge, blast and collect, sweaty palmed instant reaction brigade. With **Kirel** you have to think, and think very fast.

Somewhere in its development **Kirel** was related to that ancient arcade game where you had to shunt a boot to a bomb — reaching it before it blew to bits. **Kirel** has the same basic idea, on each new screen you must get to and leap on, a bomb or several bombs, before time runs out and the biggest bomb of the lot expresses itself in the only way it knows how. In **Kirel** this all takes place in 3D and is made difficult not only by some nasty monsters that look like seaweed on a bad day but the mental torment of working out how to get where you want to go.

There are 70 screens. On each there are dozens of blocks arranged in all kinds of patterns. Getting to some of the bombs is going to involve manipulating the blocks, building block bridges and viewing the problem from several different angles (you can change viewpoint like **Ant Attack**).

This would be comparatively simple were it not for the fact that the **Kirel** character — a blob with two big eyes — can only 'climb' one step at a time, ie it cannot bounce on top of any block more than one block higher than the block on which it is standing.

Kirel can pick up the block it's standing on and drop down one level but if that then means there are no adjacent blocks one above, below or at the same level as Kirel you have achieved precisely nothing. Get the picture (if you do without re-reading the above several times you should do well at this game).

Kirel is pleasing to the eye, even though 3D screens don't have the 'gosh wow' impact they once had. I found the mixture of block structures and bizarre objects like the cheese gave the whole game a wonderfully surreal touch. Kirel and the monsters (a name for a group if ever I heard one) are very Ultimate-style wacky with amusing (if jerky) animation giving them some personality.

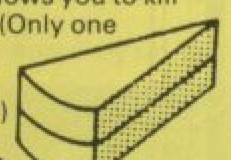
Addictive have faced the old Spectrum 'any colour you like so long as it doesn't move' attribute problem and like all sensible people waved the white flag — all the screens are two-colour only. Can't say I minded much though.

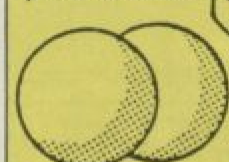
Sound is surprisingly effective, perhaps because it doesn't try to say anything other than squelch and burp at the appropriate moments. The squelches and burps are, however, most effective.

Help

There is really only one key tip. To get to higher levels without simply trapping Kirel you must think in terms of stepped platforms. Build up several blocks at the same time so that you always have adjacent blocks on to which you can move.

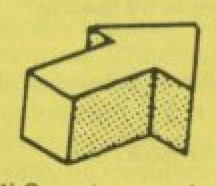
1) If you find what looks like a large chunk of Black Forest Gateau this allows you to kill one monster. (Only one monster for such a large piece of cake?)





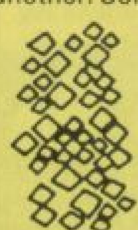
2) Balls — collect these to gain extra time.

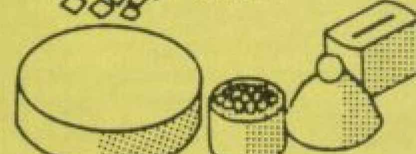
3) Arrows — give you more 'bridges', ie using the bridge option Kirel can generate a platform at the current block level provided there is nothing in the way.



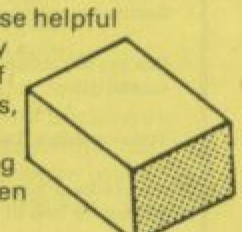
4) Sweets — restore energy levels should the Seaweed Monsters slurp too much of your energy away.

5) Transports and networks — these let you move quickly from one section of the screen to another. Some are automatic — you can't control where you go — some work like a lift and you can move up and down to different levels.





6) Cubes — these helpful devices destroy vast sections of block structures, walls and pyramids letting you get at hidden bombs.

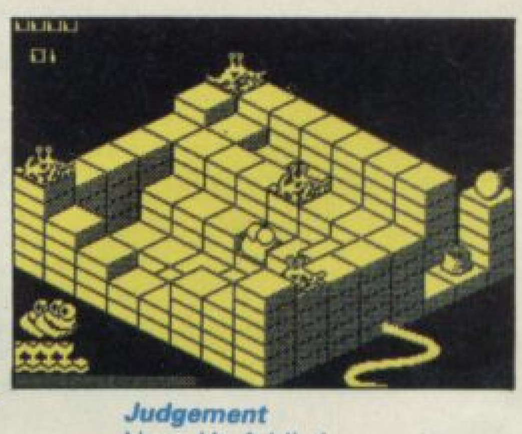


7) Use the pause option frequently to give yourself time to think where on earth you are trying to go.

8) Use the multi-viewpoint option, it may reveal structural secrets which prove vital to solving the screen.

9) Don't try to collect all the goodies (cake, balls etc) on a particular screen unless absolutely necessary. Some of the screens are relatively easy to solve in terms of getting the bombs but contain 'red herring' fiendish puzzles to reach bonus objects. Don't be tempted — shrug your shoulders and walk away like a man.

SOFT 5 WARE



More Problems

1) for each screen there is a time limit, indicated by a length of fuse which slowly burns away and different screens have different limits.

2) The Seaweed Monsters lurk all over the place. They don't attack you as such but bumping into them is very easy and it loses you energy. If you run completely out of energy you've lost whether the bomb explodes or not.



3) Impassable Pyramids, littered around later screens, are impassable, as you might expect. You have to go around them.



4) Invisible walls are found on later screens and form an impassable barrier just like the Pyramids except that you can never remember where they are. Very nasty.

Judgement

I loved it, Addictive say the game has 'a lot of original ideas'. That's pushing it, but it certainly puts a lot of old ideas from other programs together in a new way. It has all the thrills of an arcade game whilst testing your reasoning far more than your trigger finger.

Skip Austin

Publisher Addictive Games
Price£8.95 **Memory** 48K
★★★★★

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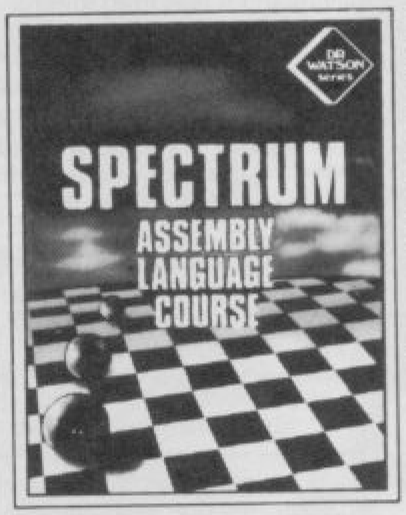
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Redhawk

Redhawk is the first adventure from Melbourne House since **Lord of the Rings**.

If you're looking for more of the same then you're in for a disappointment. **Redhawk** draws on elements from **Mugsy** to produce a kind of adventure cartoon strip. The action takes place in three 'boxes' across the screen with text appearing as 'bubbles' above each character.

You are Kevin Oliver, amnesiac and possessor of amazing powers. All you have to do is say the word 'Kwah!' and you become Redhawk, the superhero, dressed in a very natty little cape and with a head-dress reminiscent of Horus, the Hawk God of Ancient Egypt. Must have been bitten by a scarab . . .

Below the strip cartoon style graphics window is a text input area used for communication



with the program, and two status indicators, one showing your current energy level, and the other your current popularity rating. There's also a little picture showing just who you are at the moment — useful when you have a case of split personality.

Below the text window, there's a line of 10 functions — these are command words which you can access just by hitting symbol shift and the right number — so symbol shift 3, 4 means you have input 'Say "Kwah" ', which is the magic word to toggle from Kevin to Redhawk and vice versa.

Above the graphics window, there's just enough space for a line of text, which is one of the two ways the program communicates with you. If you've input something it doesn't understand, then it flashes up 'Redhawk is confused'. It can also give you further information about your status or the location you are in.

The other way the game talks to you is via speech bubbles which form themselves just above the characters' heads. Whatever you say to someone appears in one of these balloons, and what they say to you does likewise.

So much for the mechanics of the game. What's it like?

When the game begins, you find yourself standing outside a hospital. You remember nothing except the magic word. The first thing is to establish yourself as a respectable superhero, so the police will stop laughing at you when you turn up at the cop shop in your halloween costume. Then get a decent job — you know, like the one Clark Kent has? — so that you can barge in places where you're not usually welcome and can afford to take taxis around the city.

Begin by travelling south-east from the hospital. You'll find yourself in a shameful and smelly location. Somewhere here you'll find something that will make somebody hire you on the spot — it must be a sign. When he asks you what you want, be negative and snap at him.

From there, go to the wide open green spaces, and hang around looking for the sort of person who could easily help you meet the boys in blue. Get him to accompany you, and don't forget the mugshot.

When the city's finest have done congratulating you, they should give you something that crackles, and I don't mean rice crispies. Don't forget to do your job properly and your new employer will also give you something that crackles — only this time it's green and folds, and I don't mean lettuce.

SOFT 4 WARE

Redhawk has all the Melbourne House hallmarks: the game style is highly original and the presentation is slick and its all cleverly programmed.

A game of the **Sherlock** class it certainly isn't, however. Seasoned adventurers will find the going quite easy.

But it is an excellent introductory adventure.

Next time, though, I'm putting on thermal underwear — these body-stockings may look fancy, but they're just a bit too cold around the pin feathers.

Gary Rook

Publisher Melbourne House
Price £8.95
★★★★

Starstrike II

There are some games where you combine lightning reactions with cunning strategy. There are some games where you spend hours pondering your next step. And there are some games where you just blast everything that moves. After I totally failed to understand the subtleties of the several stages of this game I resorted to the latter approach and a jolly good time I had too.

Starstrike II **is, hardly surprisingly, a sequel to** Starstrike I **— though, to confuse things, that was called** Starstrike 3D.

This time around the 3D graphics are shaded and though it slows them down rather and creates one or two jerky patches, it's still a highly addictive shoot 'em up. The main addition is an overlay of Elite-**type lore.**

The basics are simple enough. The Outsiders are on their way in — to Earth, that is — unless you can neutralise their 22 planets. Your ship isn't equipped for hyperspace jumps so you'll need to return to the mothership for transport between the five star systems and also for taking on reserve fuel and repairs. Choose your system and you'll see stars as you warp in.

Once there you choose a star and as some are as heavily defended as a wet paper bag full of jelly beans while others are more like Fort Knox it's wise to take note of the information on the inlay. Hint — you'd expect an agricultural planet to be less well defended then a military or industrial one, wouldn't you?

So you're on your way to Beta III which means you miss out on the joy of knocking the pods off a space wheel then docking with it — a wholesale lift of everybody's least favourite activity in Elite. **Once inside the wheel you'll need to get out again by blasting the three control units that surround its constantly opening and closing iris valve.**

On Beta III it's straight to the Defence Fields which have small openings in them. These are incredibly well defended, with circling shapes and spinning shutters and cannons to blast stars at you.

This stage is straight space dogfighting, and when the enemy isn't in view — which is most of the time if your reactions are as slow as mine and the enemy's fighter is of a particularly nippy type — there are two displays to indicate relative position. This is very fast but can become almost infuriating if your opposing ace is so agile that you can hardly ever target him. Once you zap one of them there will be a fuel pod for you to scoop up and replenish supplies, which may later be traded in for stronger shields, but Outsider scoop ships will claim it if you're not quick.

Finally Ground Attack and The Ventilation Duct and now your cross hairs run along the



SOFT 5 WARE



ground as you lay waste to everything in sight in a style that would make Ronnie smile. There are lots of defences to dodge here too. Once you're in the control centre of the relevant type for the planet, you have a brief period to blast the Reactor System/Battle Computer/Agricultural Control Centre (distinguishable because of the mud on its wellies) then exit through the rear wall and it's on to the next planet.

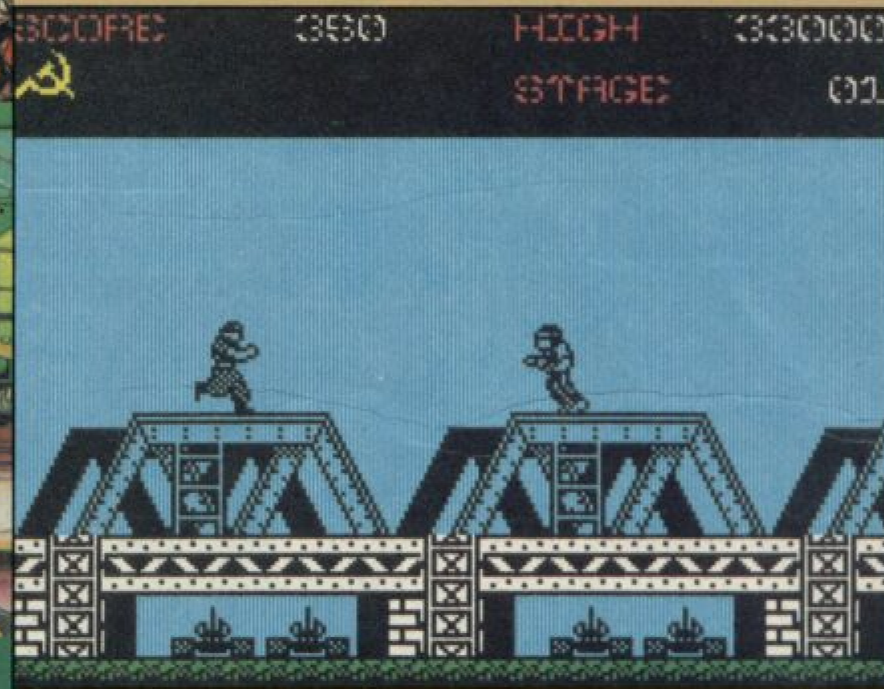
Just before writing this review I loaded the game for a brief final look . . . and when I finally dragged myself away it was over an hour later which tells its own story.

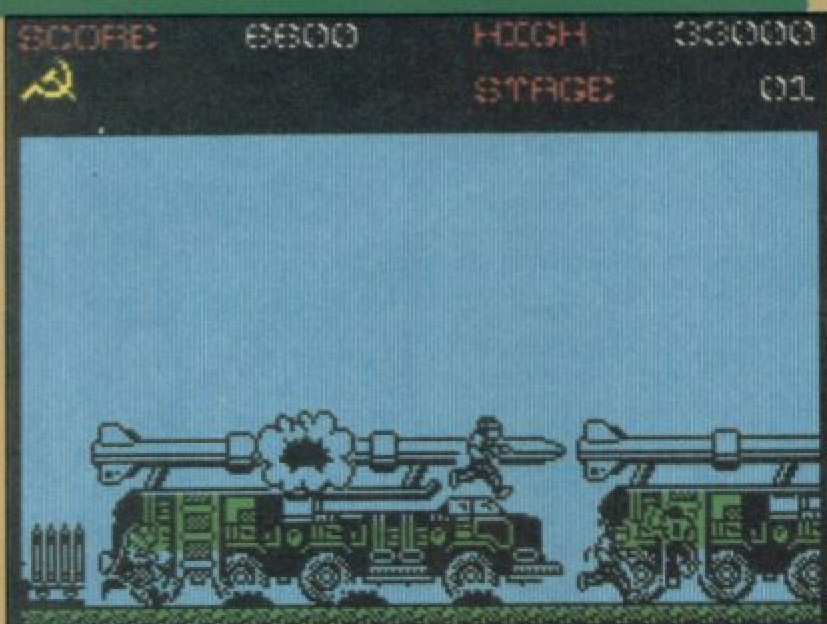
Jerry Muir

Publisher Realtime
Price £7.95 **Memory** 48K
Joystick Sinclair, Kempston, cursor
★★★★★



Green Beret





Coming face to face with an enemy commando. Make sure you avoid the flashing mines under the bridge.
Left: A brief moment of calm before running into the next hot spot

IF IMAGINE thinks it can turn you into a hero just by making you wear a funny hat, it's got another think coming. By the third game I was sweating with hardly enough strength to lift a fork, let alone a knife. More training required. The game — very much in the **Commando** mould — is an almost perfect replica of Konami's **Green Beret** arcade machine in its graphics, the tactics needed to avoid the enemy and its plot to rescue four wilting hostages.

Sounds familiar? Forget about the scenery. As a story line it is almost exactly the same as **Rambo** but blows Ocean's effort out of sight in the graphics and game play stakes. **Rambo** tends to be very sparse on vegetation. By comparison, **Green Beret** is positively burgeoning with detailed graphics and colourful backdrops — which include the harbour, the bridge, and the hostages at the prison camp.

To reach them you jump, duck, fire and stab your way through four scenarios. The first, the 'bridge and missile base' is supposed to be easy. Believe me, it's not.

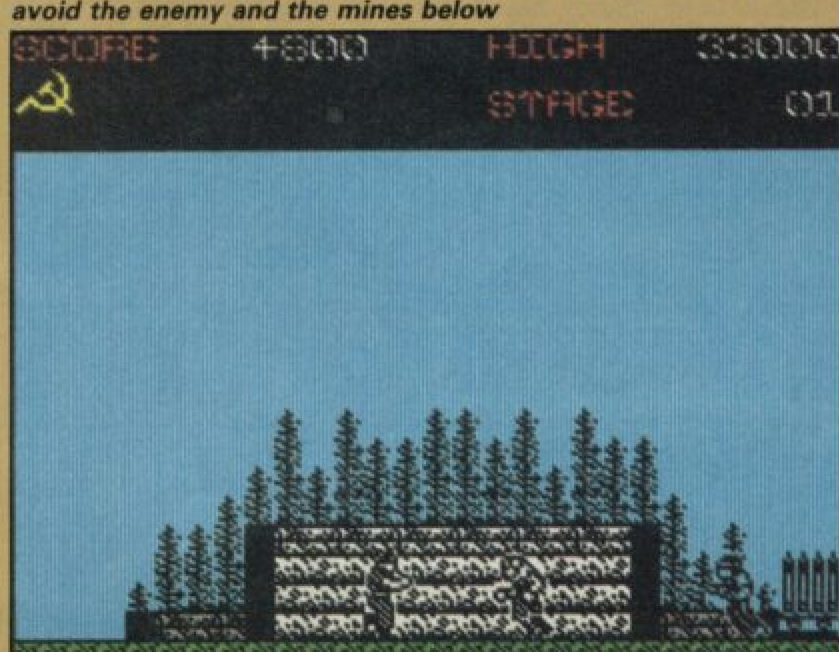
The bridge itself has three levels so you can at least dodge the hoards of suicidal maniacs who leap upon you from all directions. As a well trained commando you should have no problems sorting out this motley bunch — just whip out your dagger and start stabbing while leaping from level to level to confuse the devils. The enemy have several tactics. Soldiers which run fast often carry guns. Duck or leap over the bullets or you'll disappear in a puff of smoke. Others leap — listen for the 'boing,' 'boing' sound, jump up to meet them in mid-air and use your knife. Ordinary patrols can be despatched with a spot of nifty knife work but watch your back.

At the end of the bridge dodge the mortar fire and run to the missile launchers. You'll be attacked from all directions but if you time it right you should be able to climb on to the launchers and run across the top. That way you'll dodge three flashing mines concealed at ground level.

The graphics are excellent, not as highly coloured as the original arcade version or even the Commodore version, but with an incredible amount of detail. Sound is minimal and I miss the rousing marching jingle that went with the arcade game. That's on the 48K — the loud splutter and pops you hear on a 128K almost make up for the lack of music.

Additional weapons can be picked up by killing the enemy Commandant. He'll leave behind either a flame thrower, grenade or rocket launcher which becomes yours until you've used it three times, or until you're killed. One useful tip is to save the bonus weapons to the end of the screen where you'll need all the additional fire power you can get your hands on.

Sprint across the top of the missile launchers — that way you avoid the enemy and the mines below



Now you can storm the harbour. Use the storage containers as levels and, again, try to outwit the enemy. Full marks to Imagine for sticking so closely to detail.

With practice you'll learn which soliders and objects to dodge, duck and jump and your rescue mission will stand more chance of success. After the harbour it's on to the hostages, and the prison camp. One small grouse. If you're playing with a joystick and you want to use one of the special weapons, you have to press a key on the keyboard — it's virtually impossible to do this with ease while holding the joystick base with one hand and pushing the stick to move right with the other. By the time you manage it it's highly likely that you'll have been killed, in which case you lose your weapons.

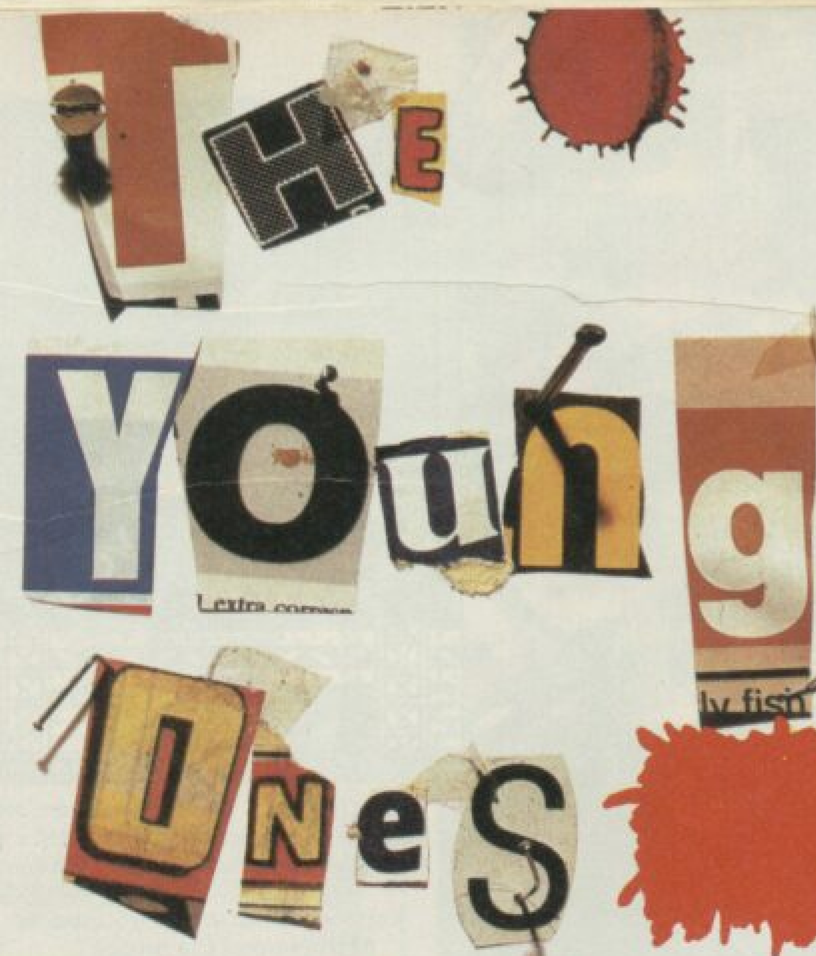
You'll find **Green Beret** more challenging than **Commando** — another game in this reactionary Ramboesque Smash the Red Threat phase. **Commando** closely follows its arcade counterpart and though play is different in terms of strategy, **Green Beret** wins hands down. Great programming. Anyone who gets anywhere near the hostages please tell me how you did it.

Clare Edgeley

SOFT 5 WARE

Publisher Imagine
Programmer Jonathan Smith
Price £7.95
Memory 48K/128K
Joystick Kempston, Sinclair cursor
★★★★★

The Young Ones

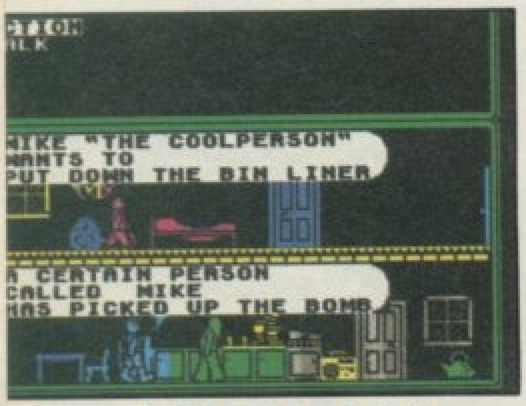


Cliff Richard doesn't get thrown out of the window but if you want to get the zits off your botty this program will show you how.

The **Rather Elderly By Now Ones** has finally arrived, complete with lots of hype about a wonderful new artificial intelligence routine called Puppetmaster. It's Orpheus' word for the bits of the program which allow the four characters to each do different things at the same time.

What you see is two rooms at a time of the Young Ones' house, and the four characters — Neil, Rick, Mike and Vyv — moving around. At the top of the screen a series of menus appear, offering various commands like 'walk', 'talk,' 'open' and so on, or a list of objects to pick up and use.

You choose which character to control for the game, and although the objective is the same — to get out of the house — each character has to solve



Switch on the radio in the kitchen for more gossip

different problems and collect different objects to do that. The ultra-violent Vyv shoves his collection into a bin-liner, for example, while Mike will stash his supercool gear into a suitcase. Vyv is supposed to be the easiest character to play, according to the hint sheet, but all the problems seem pretty tough to me.

Buffs may start muttering **Everyone's a Wally** to themselves at this point. Certainly there are no arcade skills — everything depends on finding the right objects and using them in the right way. Neil uses the lighter to light his joint, which is obvious enough, but who's going to guess that the cat likes peas which must be defrosted with a blowtorch first?

The graphics are not immensely impressive. I found myself more or less ignoring them most of the time and concentrating on the menus which made the game feel like a particularly stunted adventure. Some of the objects are only recognisable when you match them up with the list at the top, and many have an alarming habit of disappearing if you 'open the bed'. While there may be a reasonable explanation for that — it certainly seems to be part of the problem solving — there's no sense of realism in it.

Characters speak, which gives them genuine characters of a sort. Rick says things like, "It would be really anarchic to pick up the kettle," while Neil might say, "If I don't pick up the chainsaw no-one else will." The words appear in speech bubbles, which hover in place for a bit while the character walks out from under, again spoiling the feel. They do however give clues about what's going on — you might discover that Mike has picked up the seeds which you, as Neil, want to put in the grave. "We sow the seed, we grow the seed, we eat the seed . . ."

Cosmic stuff, eh?

Not really. Orpheus has put a lot of effort into explaining how wizard Puppetmaster is, but what it really boils down to is a point system for various actions so that characters will tend to do things which have a high point value for them. The idea is as ancient as **Galaxians,** though I still love watching computer-controlled characters picking up and dropping the same object over and over again because the software can't think of anything better to do.

The humour works best if you know the series well. Alas, it's some time since the programmes were shown, and memory fades. I did recognise a few of the objects — SPG the hamster, the golfball in the toilet and Neil's grave-digging reverie, among others. If you're not familiar with the characters, you'll have trouble working out who does what.

SOFT WARE 3

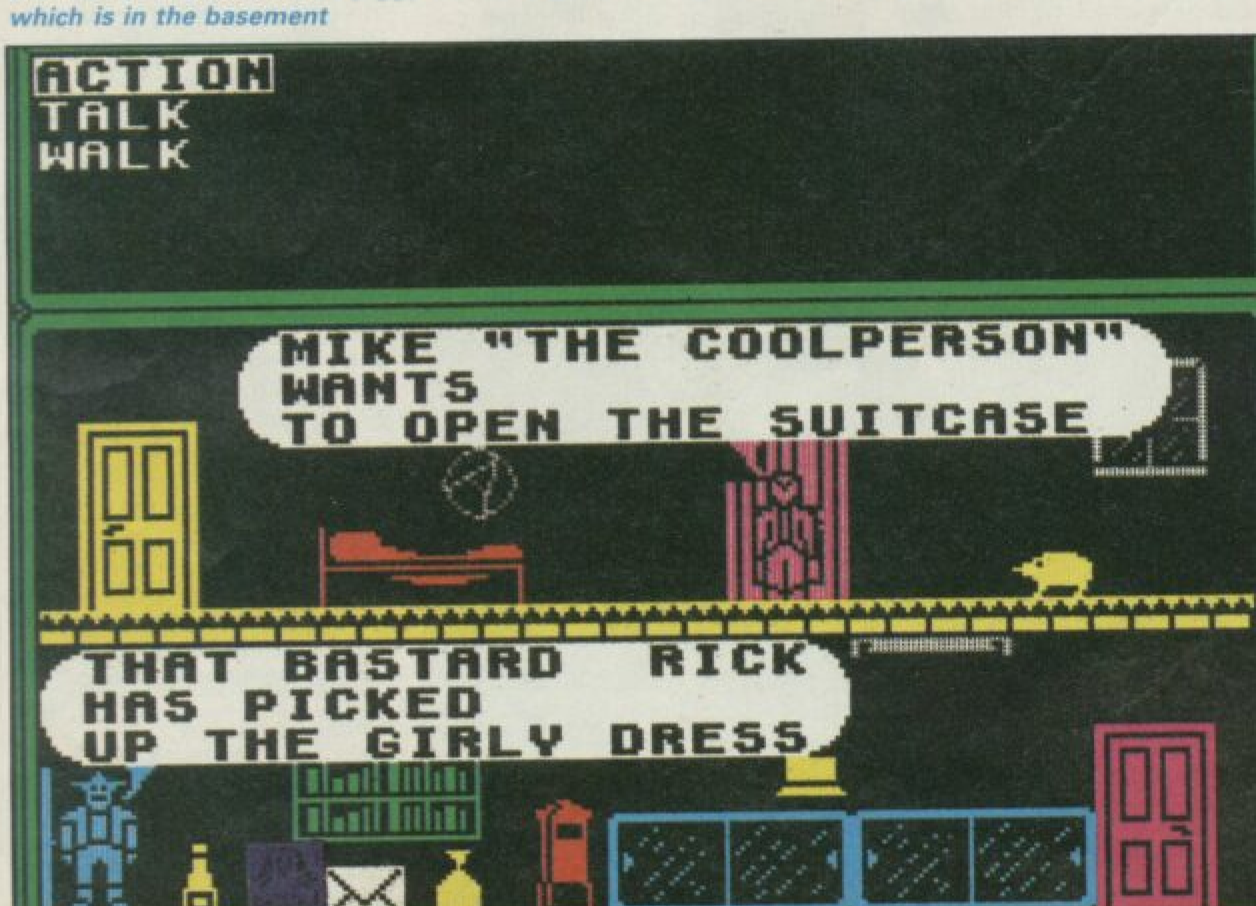
The trouble with these ambitious multi-character programs is that, while there may be masses of brilliant code designed to imitate artificial intelligence, you never really appreciate it when you play. As it is, you're left with disappointing graphics on a rather chaotic game.

The one unusual feature is the way other characters interfere with you, stealing your objects and telling tales on each other. That lends extra dimensions to the strategy, but can also frustrate a carefully plotted solution.

If you want this sort of stuff, then the **Wally** games or **Brian Bloodaxe** may be more accessible. Fans of the series and utter bastards with spotty bottoms who write revolutionary poetry about Vanessa Redgrave should add another star to the rating and take a sledgehammer to their piggy-banks.

They'll love it — lentils, girlymags, dead rats and all.

Chris Bourne



To complete the game you'll have to make a phone call, but you'll need some money first — that can be found in Rick's piggy-bank. To get the dough smash the pig with the sledgehammer which is in the basement

Publisher Orpheus
Price £7.95
Memory 48K/128K
Joystick Sinclair, Kempston, cursor
★★★

ACTION! ACTION! ACTION!



Biggles

Packed with all the action and atmosphere of the movie, Biggles is a multipart game that'll keep you on the edge of your seat right to the end of your mission.

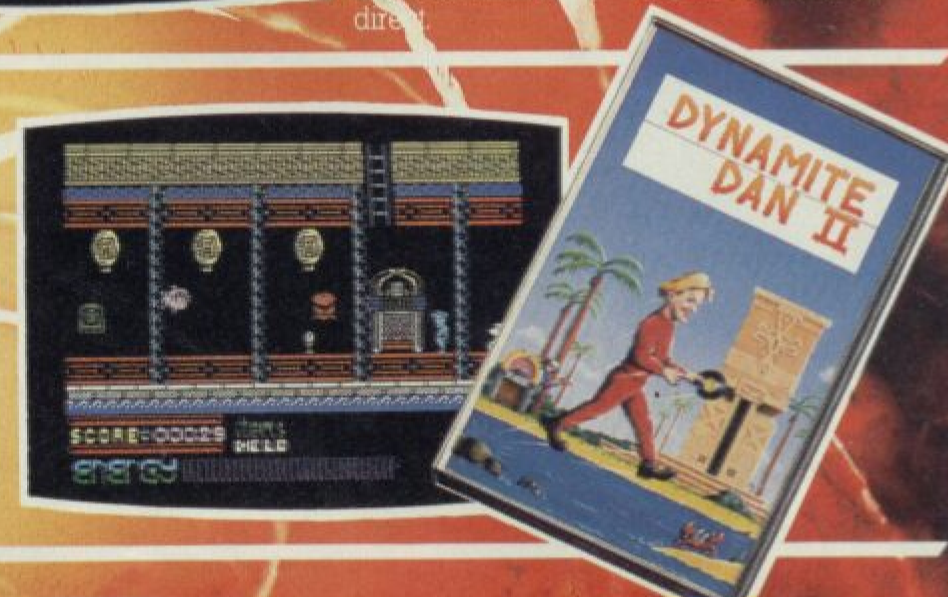
Spectrum · Commodore 64 · Amstrad CPC £9.95 tape
Commodore disk £12.95 · Amstrad disk £14.95

Biggles t-shirts, pilot's scarves, button badges and stickers available too – ask your retailer or call us direct.

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Spectrum £7.95 tape





ACTION REFLEX

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COMPILATIONS

Let's face it, compilation tapes aren't really exciting. It's hard to get very enthusiastic about collections of games everybody has seen, everybody has played and some people have completed to the final screen.

Program compilations observe the same principles as compilations of hit records: everyone thinks they're boring yet they get to the top of the charts and they sell themselves either on quantity (500 great dance tracks for only £2.99) or topicality, ie they incorporate material that was a hit only last week.

The past weeks have seen enough material plonked out on compilations for the Spectrum to keep your joystick waggling well into the next century (when Amstrad will have introduced the one plug planet for $399 Eurodollars [plus VAT]). The question is will you even by playing the games well into the next afternoon?

30 GAMES

Thirty? Yep, 30 spread over two cassettes. If your cassette machine doesn't have a tape counter the biggest game will be trying to find out where abouts on the tape the program you actually want is located. Thirty sounds like great value but how many will you actually want to play? Here are my highlights.

SOFT 2 WARE

Gridrunner was one of the few Jeff Minter games converted to the Spectrum. Most Minter games have the same basic qualities, they are very fast and consist almost entirely of killing a lot of different things very quickly. **Gridrunner** is played on a matrix, you control two separate laser bases one running north, south, up and down the left-hand side of the screen, the other east-west along the bottom. Over a seemingly endless number of screens you zap and zap again as assorted objects zip around



the matrix. Otherwise . . . **3D Tunnel** is from New Generation who at one time had the Ultimate crown of best technical achievement in programming. The graphics on this one were astounding for their time. You travel down a tunnel in which are frogs, rats and bats. Bizarre, visually excellent and like many New Generation games a bit dodgy in the gameplay department.

Meteor Storm, the first game I ever bought for the Spectrum, it's a good impersonation of **Asteroids** the ancient arcade game.

And the rest, **Chess Player** is simply a very average chess program. **Carpet Capers** is dire — a game about laying carpets lacks a certain amount of intrinsic conflict. **Dragonsbane** is a sort of role-playing game where you decide in each new room whether to fight, seek, help etc. Your task is to rescue the Princess Paula — this is not a good name for a Princess. **Blood and Guts** is one of the few arcade games ever to be set inside the human body — instead of blasting aliens you blast infections lurking in every nook and cranny, watch out for the cholesterol and replenish your energy by finding red blood cells. So far so educational but you also have to assemble a miniturised submarine. This unrealistic touch spoilt the game for me.

It goes on. There are a couple of management/kingdom games and a text adventure, and a great many really terrible arcade games.

30 Games is good value but only just. Of the 30 games I think around ten merit more than a few minutes play and perhaps five will get you hooked.

Greg Sullivan

Includes: Gridrunner, 3D Tunnel, Meteor Storm, Chess Player, Dragonsbane, Blood and Guts, Carpet Capers, The Valley, Fall of Rome, Micromouse, Strontium Dog, and Laser Zone
Publisher Argus
Price £9.95 Memory 48K
★★

Computer Hits 2

Ten games on this pack but almost everyone of them better than any of the programs on **30 Games**. With the exception of **Circus** which is a graphic adventure originally produced by Adventuresoft, (who had a good reputation for original ideas and compelling plots — **Circus** is no exception) all of these games are of the arcade 'bash 'em to bits' sort.

Best of the bunch is **Codename Mat** which is a sort of early **Elite**: it lacks the 3D graphics but it looks good nevertheless, using solid sprites of various sizes to produce the illusion of space battle through the cosmos. It's not just zapping, when your spaceship gets wrecked after a particularly heavy battle there's a highly dramatic section where you search frantically for a place to make repairs before your fuel runs out. There are also strategy elements as you issue commands to other parts of the spacefleet, organising them as best you can to defend the various planets under your care. Playing this one again was like listening to an old record that you had forgotten how much you enjoyed.

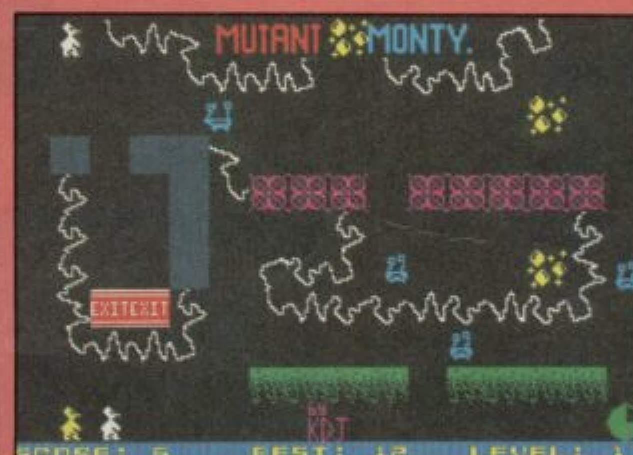
Android 2 by Vortex — a follow up to, astonishingly enough, **Android 1**. It features a robot you control whose lack of facial expression and faintly neanderthal appearance reminds me of the robot in *The Day the Early Stood Still.* The setting is a 3D maze, chock full of assorted insect-like baddies, your robot must survive the maze and rationalise the paradox zone. Lots of lasers, nice scrolling backgrounds and that faintly daft robot, a compelling game.

Of the rest **Wizard's Lair** is a sort of **Atic Atac** (what is that word that means rip-off but doesn't attract writs for libel?) . . . er, tribute.

Technician Ted was one of the few **Manic Miner** style games that was more than a poor copy (apart from anything else it's very, very difficult).

Mutant Monty is more multi-room maiden rescuing featuring monsters called Quantum Leapies. It's collect-and-dodge of the most tedious sort. **Snooker** is Snooker — quite a good version of the real thing done originally by Visions.

Of the rest **Superpipeline 2** is



SOFT 4 WARE

Hotshots

The antithesis of **30 Games**. Just four (OK three-and-a-half) excellent games at a bargain price.

The half is **Mindshadow**, an illustrated adventure of some sophistication that hasn't been well converted from the C64 to the Spectrum. The graphics look a bit simple and nobody has bothered to change the character set. The end result looks a bit tawdry although the actual plot and gameplay are rather good. It begins with you not knowing who you are and where you have to go, and get's even more confusing. Pure adventurers who couldn't care less about the presentation may love it.

Fighting Warrior was released on the Spectrum shortly after **Exploding Fist** smashed its way into the



Commodore charts, and it suffered because everyone hoped it was to be the Spectrum **Fist** equivalent (since it was also about bashing people over the head). It wasn't but it's good nonetheless. The idea is to make your way across the desert to rescue the usual imprisoned princess. The problem is that dozens of beings, some of them not entirely human, wish to prevent you. The answer is combat with



the sort of game some find extremely addictive — keep the water flowing through the pipes by running around fixing the leaks, watching out for the workmen and the killer drills. The word wacky springs to mind. **The Covenant** by PSS was a highly regarded release in its time — in the Ultimate tradition, big graphics, lots of colour, lots of screens. It's all about seeking 64 parts of a parchment strewn about a gigantic labyrinth of caverns. I was never that keen on the game which seemed to lack variety but it's well programmed. Finally **On the Run** is a maze style game, you collect deadly flasks and avoid the mutants. Seems a bit familiar though, it's a wonder there are any mutants left.

Computer Hits 2 is quality rather than quantity and with nearly ten games you might really want to play and play again. It's excellent value.

Greg Sullivan

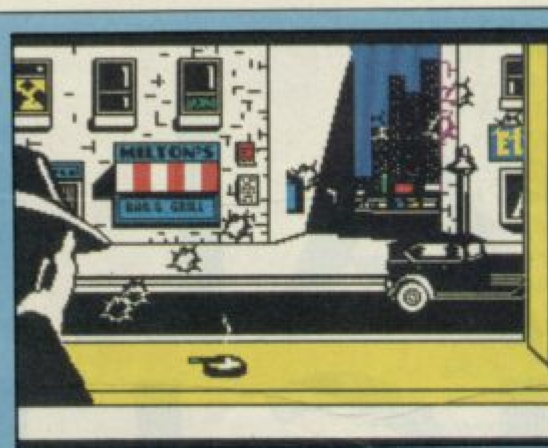
With: Codename Mat, Wizard's Lair, Technician Ted, Mutant Monty, Snooker, Android 2, On the Run, Covenant, Superpipeline 2 and Circus
Publisher Beau Jolly
Price £9.95
Memory 48K
★★★★

Off the Hook

A bit of a problem this since the proceeds go to charity — there are other reasons to buy it, apart from the games. Proceeds from the pack go to fight drug abuse — hence the title.

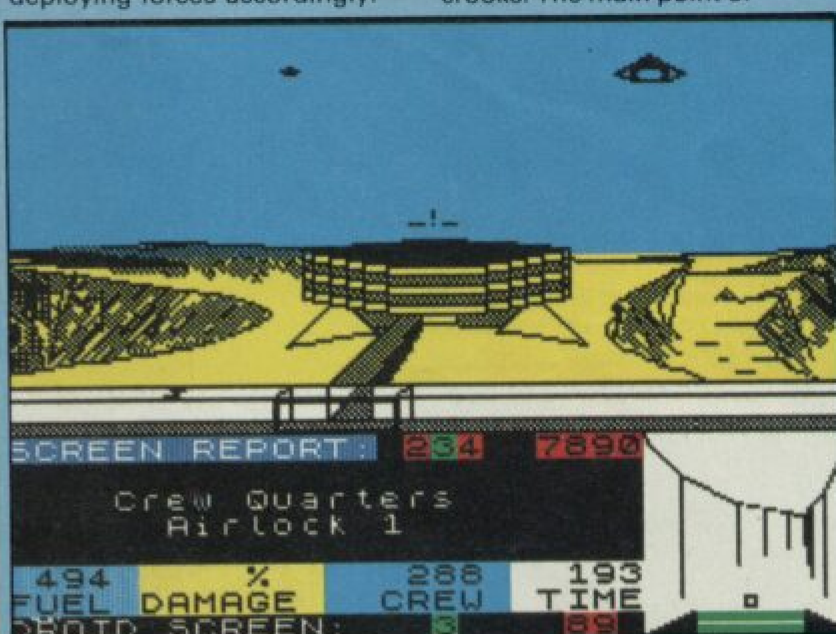
Actually on games alone **Off the Hook** is worth having, particularly if you don't have **Psytron** which is the highlight of the pack. Some of the others aren't bad either.

Psytron was one of the first Beyond releases, it came out at about the same time as **Lords of Midnight.** It is a complex game that doesn't slot easily into any one compartment — call it arcade/strategy for want of anything else. The task is to defend a life support environment from an all-out assault by nasties. This is a matter not only of blasting but of monitoring the various sections of the base and deploying forces accordingly.



It's impossible to summarise here but here's an indicative point, on the fold-out booklet that comes with **Off the Hook** half of the instructions concern **Pystron.**

There are some goodies among the rest of the games too. **Ad Astra** was the first from Gargoyle Games. Surprisingly, it's a straight space zap 'em with big graphics. A good couple of hours worth of blasting anyway. **Mugsy** from Melbourne House is basically a **Kingdom**-style management game, except that you manage crooks. The main point of **Mugsy** was that it had some huge, beautifully designed illustrative screens — the problem was that the strategy element is weak. The game doesn't last.



Splat! is an ingenious maze game where it's the background that moves — the idea is to collect things but make sure you are not suddenly crushed into the walls because the playing area suddenly decides to move on. Surprisingly addictive. **Kong Strikes Back** is running and jumping on a rollercoaster, **Chequered Flag** is an OK racing game that suffers because there are no other cars to compete with. **Fall Guy** is about doing stunts but isn't much fun. **Blue Max** is an air attack,where you get to blast both air and ground targets.

If you don't have **Psytron,** then it's worth buying **Off the Hook** for that reason alone and treat everything else as welcome bonuses.

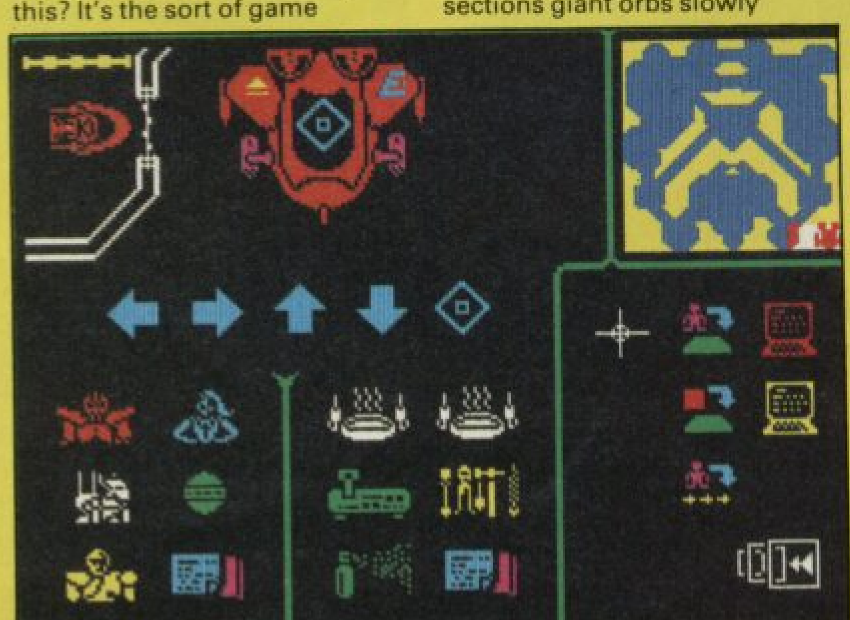
Greg Sullivan

With: Pitfall, Pystron, The Cars, Mugsy, Kong Strikes Back, Chequered Flag, Sam Stout, Splat!, Fall Guy, Ad Astra.
Publisher Off the Hook
Price £6.99 **Memory** 48K
★★★★

what appear to be large sticks, using a series of body moves to get your point of view across. The Spectrum emits a surprisingly convincing splat as your stick hits home on the head, body, wing or claws of the enemy. Violent fun for all the family.

Shadowfire was one of the first icon-controlled games. Another one of those complex mixes of strategy game-play and good graphics Beyond seems to excel at. You control, via icon instructions, a team sent to rescue Ambassador Kryxix from the cluthces of General Zoff. The screen gives you visual information on what member of the team is where, what sort of baddies are around, status etc. You use the various skills of the team to best effect to find your way to where Kryxix is located. Very highly detailed graphics and a potential playing time of weeks distinguish the game.

Finally **Gyron.** What to say of this? It's the sort of game mathematics professors heavily into science fiction would invent. Funny really since it was invented by mathematics professors. Visually it is stunningly original with a 3D view of a maze. Sections of the maze are guarded by giant towers, and through other sections giant orbs slowly move. Winning is not a matter of merely blasting but of calculating the complex principles governing both the movements of the orbs and the positioning of the towers for, whilst the towers can be removed by hitting them on their blind spot this may only cause another to be generated in a different place. Perhaps a crucial pathway that leads to the exit . . . think before you do anything, but not for too long. The wizzo graphics help to disguise the fact that **Gyron** is one of the most complicated games to win ever. If your brain is up to it, you'll love it.

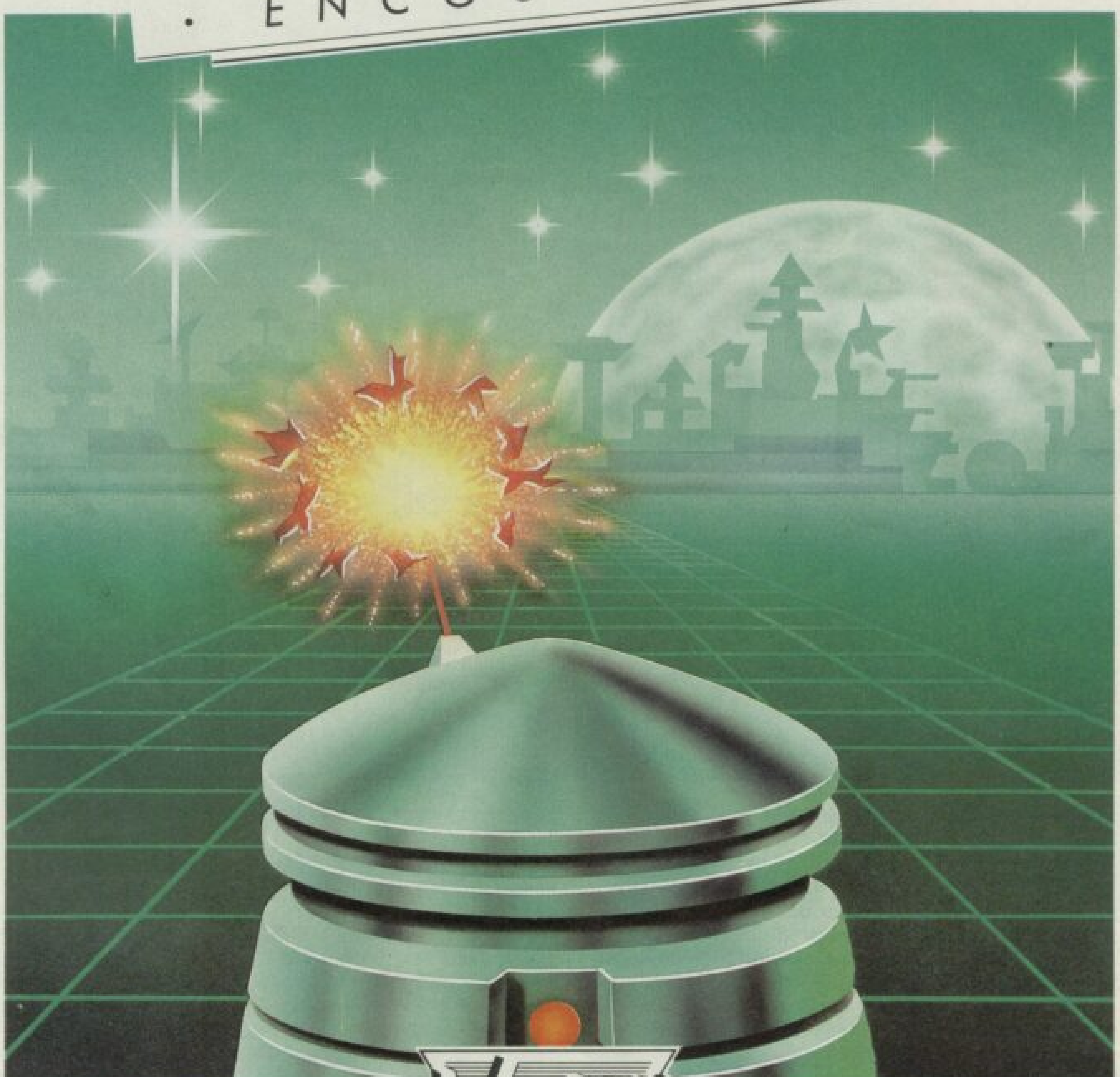


Greg Sullivan

With: Mindshadow, Fighting Warrior, Gyron and Shadowfire
Publisher The Force
Price £9.99
Memory 48K/128K
★★★★★

ALIEN HIGHWAY

· ENCOUNTER 2 ·



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Way of the Tiger

IN THE mystical world of Orb, a servant brings you to the Temple of the Rock. The monks there are to train you in the arts of unarmed combat so you can face the injustices of the outside world and dedicate your life to perpetrating goodly deeds. This is indeed a moral tale. But, what's this! Before you can claim the title of Avenger the Ninja (who would want it?) you have to survive a series of tricky tests which your adopted father Naijishi, Grand Master of the dawn (another name you'd try to talk your parents out of giving you) has set you. You still following this?

Y'see, there are these three tests in which you must fight the master's chosen adversaries which include other sundry ninjas and a few supernatural demons from the depths of earth and water. And, to make it easy, you can take the tests in any order.

Success — as with other Fighting-Fist-Yie-Ar games — depends upon your abilities with fists, feet, sword and pole. You only pass a test if at its end you still retain some inner force and endurance. Every time you get hit by your opponent your endurance diminishes and when you have lost a full circle of endurance points you lose one inner force point. If your inner force is spent the test is over and you have failed.

Since this is a fair game your opponent is subject to just the same restrictions — waste his inner force and Naijishi will need a new Ninja. Take care though, your inner force is not renewed after each battle.

First test is unarmed combat. You are dumped in the desert lands of Orb to take on a variety of monsters including a cowled Ninja who fights using his hands and feet, and a wraith with magical powers which can turn into a squat demon weilding a sabre.

The desert backdrop is similar to those in Way of the Exploding Fist but, as well as panning left and right when your Ninja moves across the screen, the scenery is shifted up and down as he jumps and ducks.

Your character has a repetoire of 16 actions which are accessed with the fire button — on joystick and keyboard — on or off. During this first test you can leap or duck, punch, retreat, jump back and kick. To turn from one direction to another you must push the joystick in the direction you want to move and press the fire button. Switching direction is crucial to master: repositioning your Ninja to face the foe must be done with lightening accuracy or you'll lose endurance.

In the second test you are transported to balance alone on a log suspended over a river. Opponents crawl out of the water, latching on to the log, and attack you. Stay on the log and fight them off, using only a stout pole for defence.

The attacking 'guardians of the deep' include a rather charming rotting skeleton and yet more enemy Ninjas which advance from the left river bank. Pole fighting is a test of agility and involves much hopping and jabbing.

Don't Jump! Your opponent can knock you off balance and into the water



Protection of the lower limbs and what they refer to in cricketing circles as the inner thigh is vital because your opponents try to smash your legs from under you and force you into the water. The only way off the log is into the water — you cannot walk on to either river bank and if you topple the test is failed.

The final test — samurai sword fighting — takes place in the grounds of the Grand Temple. Here you do battle with the greatest of the samurai warriors and, eventually, clash sword to sword with the Grand Master himself. There are again 16 movements you can make including a quaint rendition of the ancient samurai sword ritual. The joystick or keyboard gives you a nice line in head splitting, lunging, low sweeps and slashing.

Each test can be loaded separately into the master program or you can load them all in at once.

The game graphics are definitely superior to those in Way of the Exploding Fist and there's a lot more happening on-screen. For instance, delicate butterflies float around the gardens of the temple as you hack your oriental master to death with a samurai sword. Funny sense of humour some programmers have.

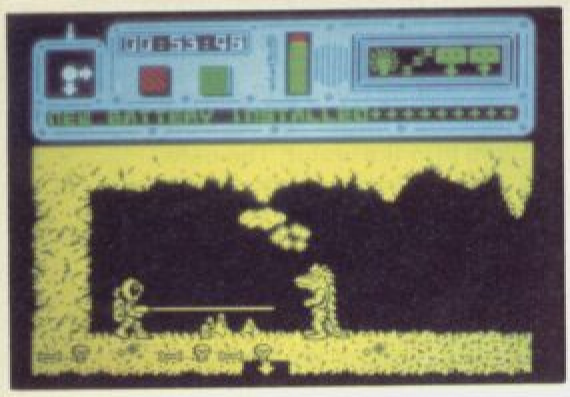
Way of the Tiger comes on two cassettes for £9.95 and jolly good value it is too.

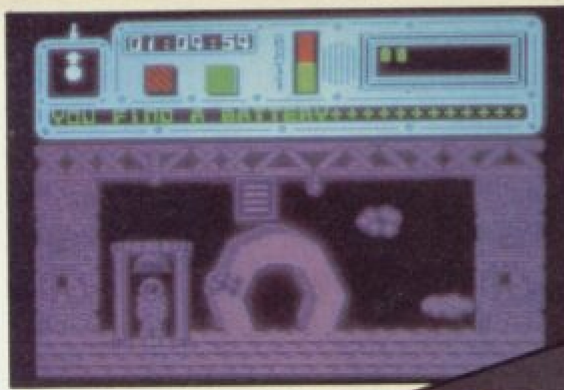
Although oriental combat programs have been well-lunged to death lately with games such as Sai Combat, from Mirrorsoft, International Karate, from System 3, Gremlin's game is bigger, better and brighter — it even adds a strand of adventure to the genre. *John Gilbert*

A baton to the throat scores high points as you do battle with a travelling Ninja

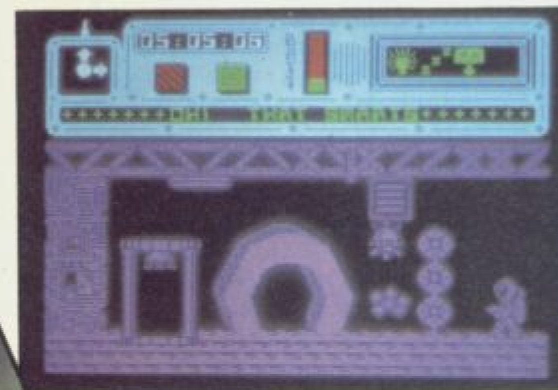


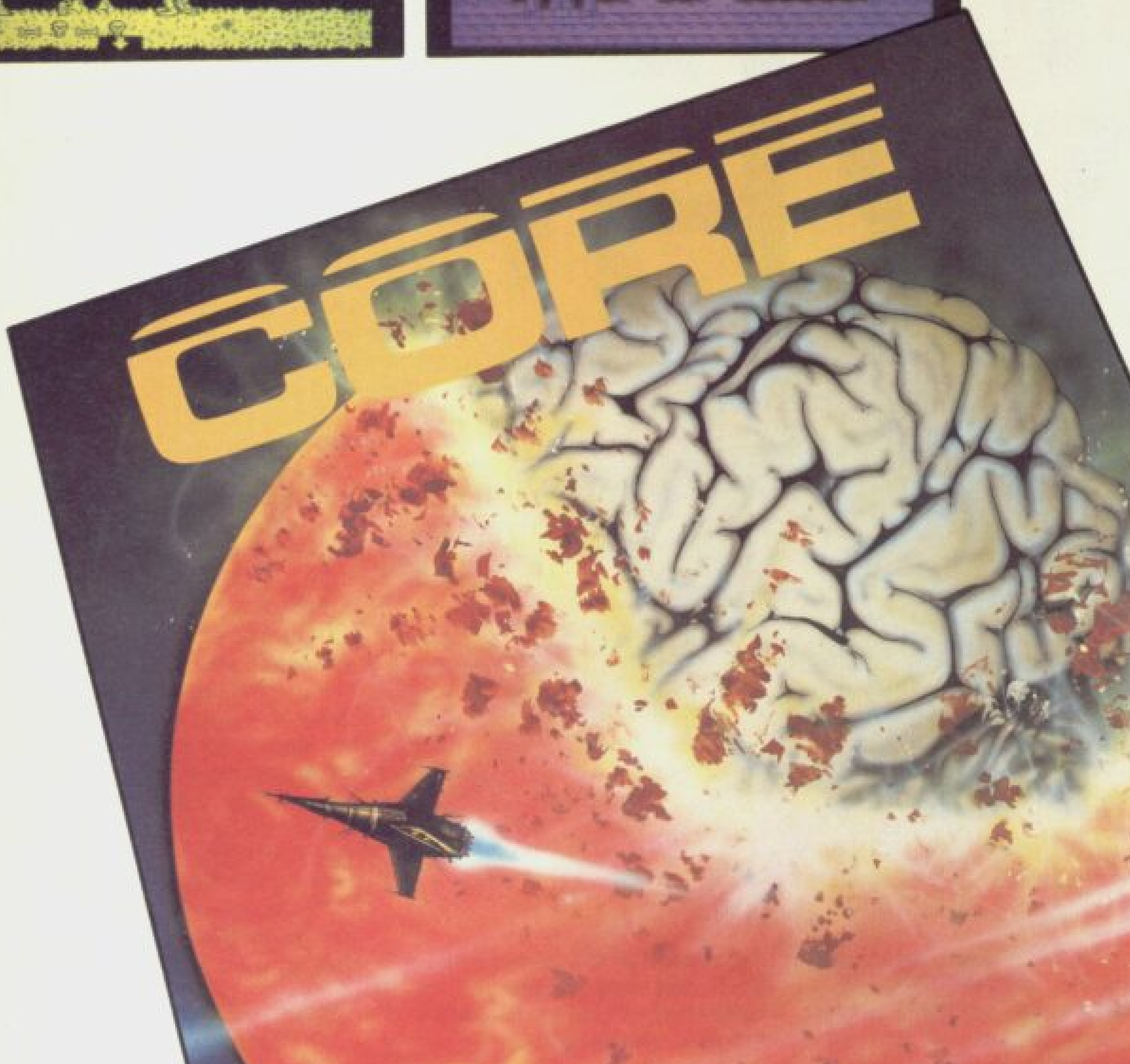
Publisher Gremlin Graphics
Programmers Shaun Hollingworth, Peter Harrop, Chris Kerry, Marcos Duroe
Price £9.95
Memory 48K/128K
Joystick Kempston
★★★★★











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AFTER THE EGG COMES...

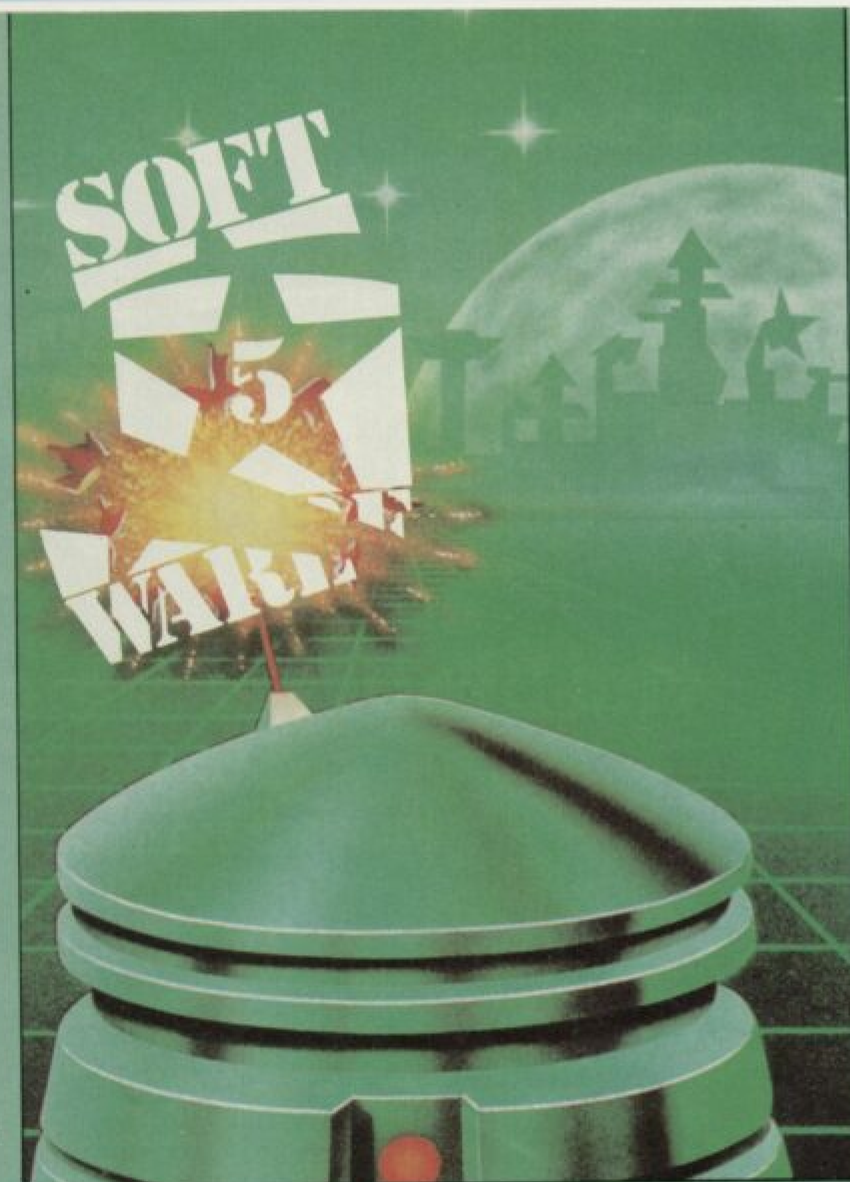
CORE

ENCY TRANSMISSION . . . EMERGENCY . . . EMERGENCY TRANSMISSION . . . EMERGENCY . . . EMERGENCY TRANS

Distress signals received from Eroc I suggest all human life threatened . . .
Expect to find terminal situation . . . Prepare accordingly . . .

From A 'n' F comes CORE; teleport into this fully animated, icon-driven adventure and explore over one thousand full-screen locations. Will you find the pieces of the scattered brain and put it back together before yours falls apart?

In case of difficulty, Core can be obtained from Argus Press Software Ltd., Greenwood House, Dewhurst Street, Darwen, Lancs. BB3 2EN.



Alien Highway

Highway Encounter was excellent with just enough problem solving, first rate graphics and some very engaging monsters — it was almost a pleasure to be zapped, they had so much personality.

The basic plot was simple — you controlled five Dalek-like robots, pushing a bomb down a rather strange **Zaxxon**-style scrolling road. Arrayed against you were various very well animated sprite aliens, and ingenious problems along the lines of 'How do I get through the chicane while avoiding the moving spark?'. All under threat of a time limit.

With **Alien Highway** Vortex has taken a lesson from Hollywood: if they like the plot once, they'll like it again — just change a few of the minor characters, and shift the scenery around a bit.

This shouldn't be taken to mean that I don't like **Alien Highway** — I love it. It has all the addictive qualities that made **Highway Encounter** one of the best games of last year.

A couple of changes have been made: instead of having five robots — or Vortrons — you have one. An indicator at the left of the screen gives you your current energy level; you lose energy by being hit by aliens, and by running into certain of the obstacles. You get your energy back by pushing the Terratron — the bomb with which you hope to damage the aliens' industrial heartland, I kid you not — into special recharging stations. Reach zero energy and goodbye, cruel world.

Controls are simplicity itself — accelerate/decelerate, fire, turn left or right. Take note of the advice on the cassette insert, which suggests you use keyboard control; you really can't get the sort of accuracy you need using a joystick. To avoid some of the dangers in this game you need instant response.

The panel beneath the view of the road is used for various indicators — an energy gauge, a status computer which flashes you messages (the only one I've had so far is 'energy low' — as if I hadn't noticed!), time left and the number of times you've pushed your friendly little bomb into one of the regeneration refuelling stations that you'll find *en route* to glory. You must get it into seven stations to prime it properly.

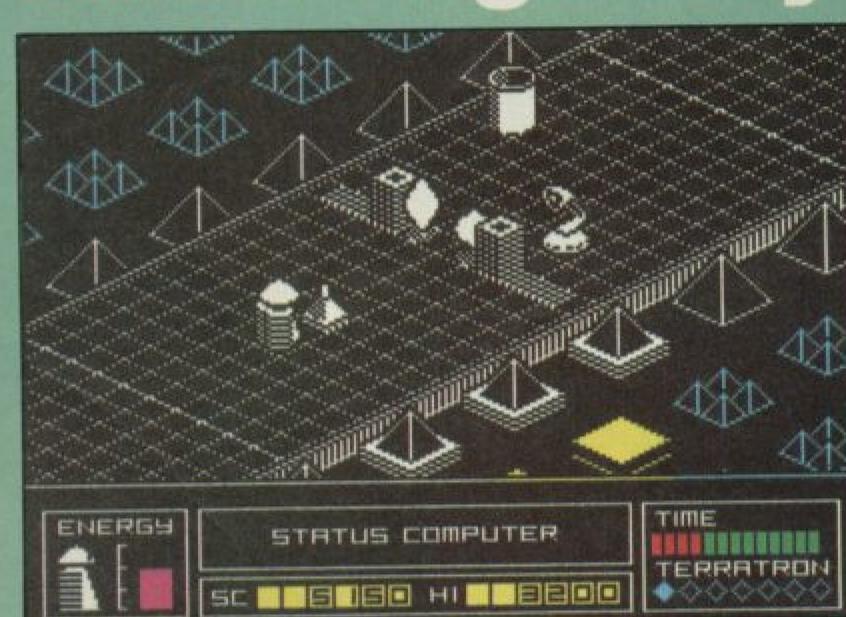
Unlike **Highway Encounter,** the arrangement of the screens in **Alien Highway** is supposed to be random every time you play the game — but this isn't quite true. The highway seems to be built up of pairs of screens, and it is possible to get a pretty good idea of what's coming up so long as you can recognise the first screen of a pair.

Another point to remember is that if you come across any barrels, it's more than likely that you are going to need them pretty soon to block one of the shuttling blobs that regularly fly across or up and down the highway.

After the first four or five screens, don't shoot off the edge (ie into the next screen) unless you know what's there. There's a particularly nasty bottleneck with a barrel situated just in the right position to block your passage altogether if you accidentally push it a couple of squares.

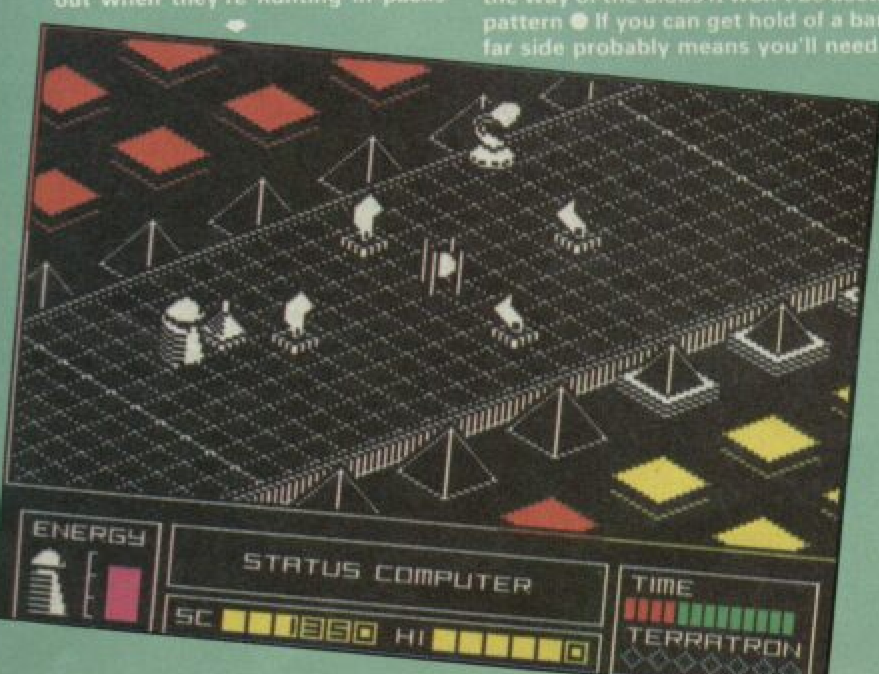
It's fiendishly hard, and some of the problems will have you tearing your hair. *Gary Rook*

Publisher Vortex
Price £7.95
Memory 48K
★★★★★

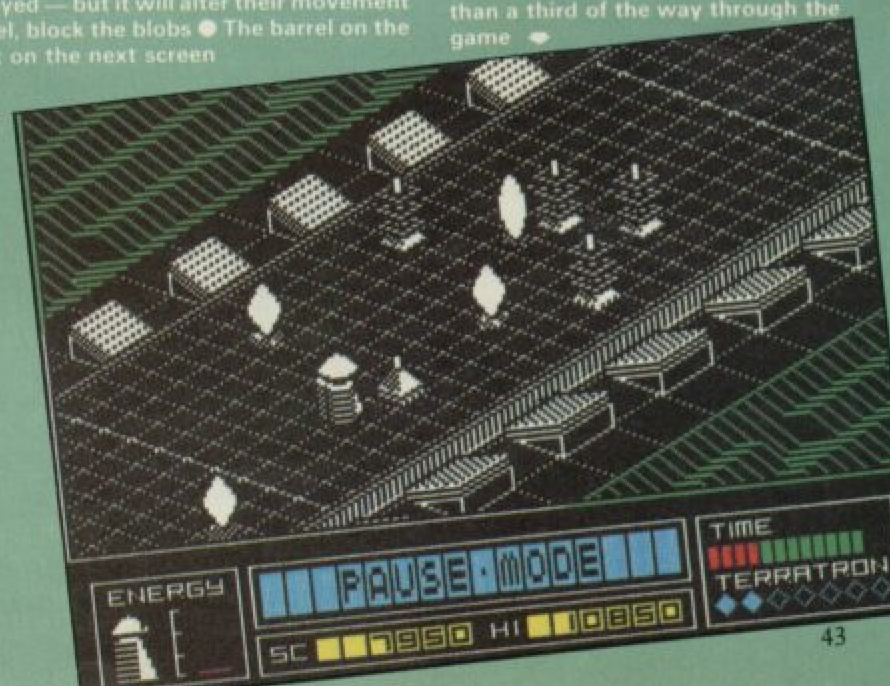


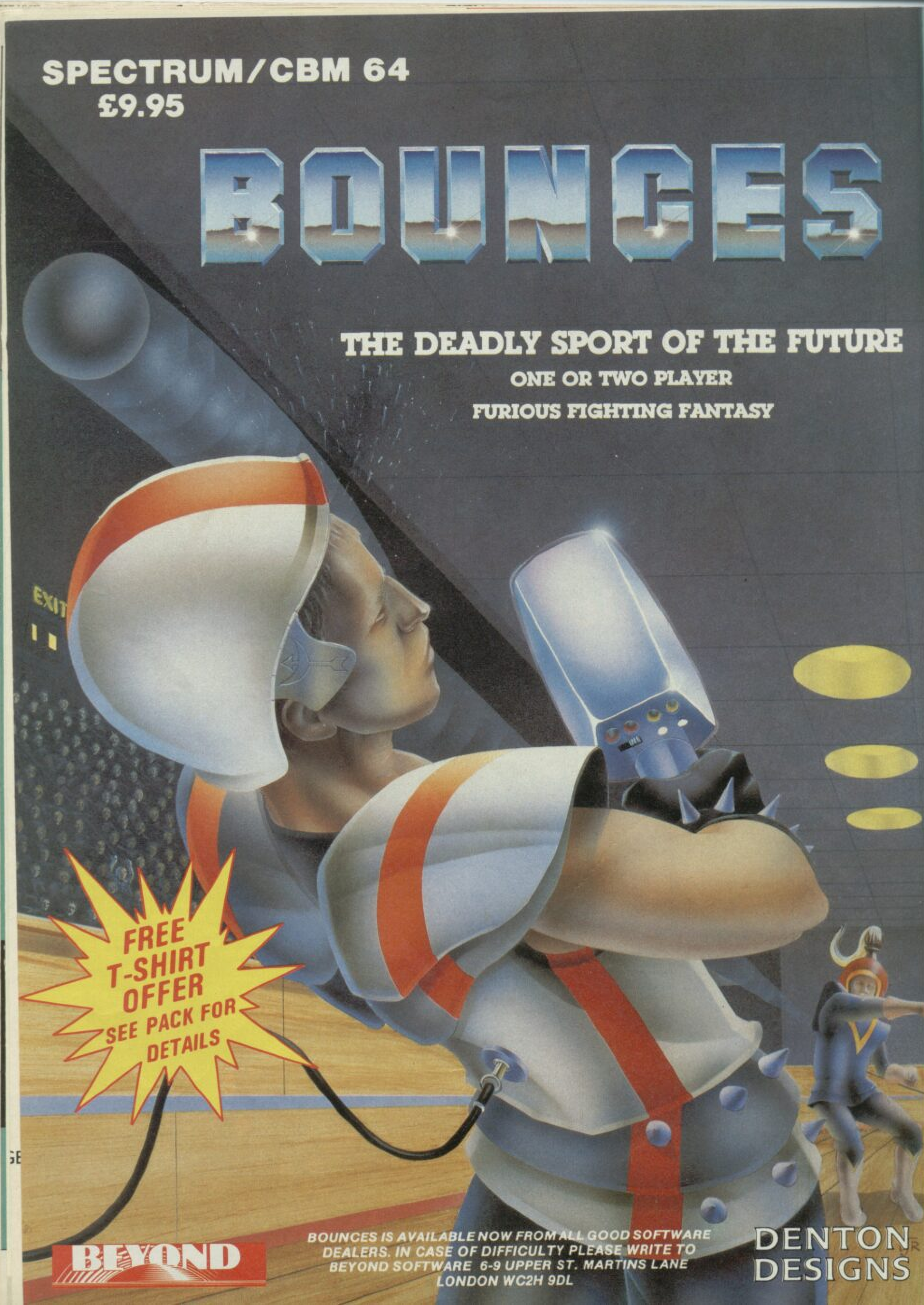
◆ One of the easier obstacles ● Shoot the chimneys and the blobs will bounce from one side of the road to the middle, rebounding off each other — you can go straight through the middle if you're lucky ● If the alien gets in the way of the blobs it won't be destroyed — but it will alter their movement pattern ● If you can get hold of a barrel, block the blobs ● The barrel on the far side probably means you'll need it on the next screen

The Vortron approaches a refuelling station, pushing the Terratron ● Watch out for the flames, they're lethal — guide your robot around them carefully ● You don't have to push the Terratron all the way into the pit stop — just touch the side of it ● The eye stalk alien is fairly harmless on its own — but watch out when they're hunting in packs ◆



Around two-thirds of the way through a pretty tough problem, and just about to die ● You get plenty of advance warning on this one — there's a sort of mirror image about two screens earlier. Try and catch the blobs with barrels then! ● The posts with bars on are just obstacles — you don't lose energy if you hit them ● The diamond symbols at the bottom right of the screen show you've only got less than a third of the way through the game ◆




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DENTON DESIGNS

Rasputin

THAT INSANE snigger is getting to me. I can't stand it anymore, I've got to share it with someone.

The awful truth is that Rasputin has rebuilt his terrible domain for the 128K and hidden the runes that will stop the destruction of the galaxy in even more inaccessible places. New monsters and further filthy corruptions of his foul mind.

The 128 version of **Rasputin** bears little resemblance to the excellent 48K version of the game, and the initial rooms are easier to negotiate than the original. The first rooms in the 48K version were almost impossible to get through, until you realised that all the monsters moved in set patterns and that your moves had to be made with pixel precision. The 128K game is similar but the layouts are simpler.

There are, however, more fiendish traps than the 48K game. For instance, you may get mauled by jagged teeth and stakes which rise out of the floor with alarming regularity.

Other traps include loose masonry, boxes which crackle with etheric energy, and giant cog wheels which spin you round and deposit you on other traps. In some of the rooms you can't even stay on the safe floor squares; they make you jump on to the next square in the direction you are heading.

Your knightly garb which includes chain mail, helmet, sword and shield proves of little use against the multitude of werebeasts and robots which inhabit Rasputin's maze. You don't lose lives if you touch a monster but you will lose energy — depicted on a sword shaped indicator.



The four runestones, which you have to collect and slot into the initial temple screen, are located in a series of rooms at the end of the game. When you enter a rune room, one of the eye-shaped indicators at the bottom of the screen lights up and a square cursor indicates which stone is there.

Although each is marked with different runic symbols it is one thing to find them and altogether another to get to them. Most are hidden on narrow staircases, patrolled by monsters, or on platforms made up of a single file of blocks which hang in the air with no visible means of support. If you fail in your bid to get a runestone you are not taken back to the beginning of the game, you are just transported to the room's doorway and have to negotiate all those dangers again.

The distinguishing feature of **Rasputin** is its fabulous graphics content which is better than **Movie** and the Ultimate **Knight Lore** series of games. In **Rasputin** the animation is smoother than anything I've



seen before, and on top of that there are at least five or six things happening on the screen simultaneously.

Make sure you have the television sound turned up loud, too, because the jaunty three-voice music is a treat.

If there is a down side to **Rasputin** it's that it is still a very hard game to play — despite the concession given by the author at the beginning of the game.

Not for beginners, this one.

John Gilbert

Publisher Firebird
Price £7.95
Programmer Paul Hibbard
Joystick cursor, Kempston, Interface II
★★★★★

Space Hunter

FEED THE world takes on a global note in this new cheapie, casting you in the role of a space hunter of food for an overpopulated earth. So into your rocket to boldly go etc — in search of the grub transporters of 15 star systems.

The game has two distinct parts: flight through space and docking, then hunting for food. The first is a cockpit view as you fly through space. Despite the apparent complexity of the controls, it's not too involved. What Mastertronic has done is to take the bit of **Elite** that drives most people mad — docking!

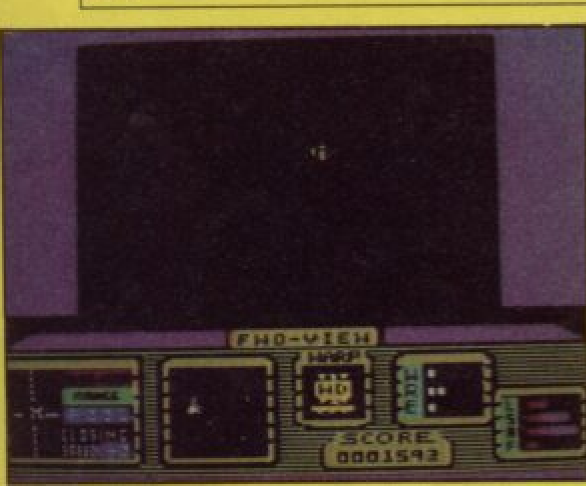
Nothing is ever simple and if you wait around wave upon wave of enemy ships fly out of nowhere to engage you in a little boisterous horseplay. You'll never survive one of these bouts of combat by blasting them so the only escape seems to be to dock successfully while the battle rages around you.

Once on board you have a jet pack with thrusters to steer around a cave system picking up various valuables. Here there are aliens and contact with them saps your strength. Providing you negotiate the caves successfully you retrace your steps to the exit and into space for the next victim of your piracy.

The main appeal of this game is high scoring and **Space Hunter** goes so far as to add an **Elite**-style system where you start out a rookie and have to progress through 11 ranks to space hunter. It's all very competently programmed and though, despite its two rather incongruous sections it's probably limited in its lifespan, it's also extremely cheap.

Jerry Muir

Publisher Mastertronic **Price** £1.99 **Memory** 48K
Joysticks Sinclair, Kempston
★★



Delta Wing

There is something in the world of marketing called the USP — the Unique Selling Point. Remember those initials because you'll be needing them later.

There is nothing at all unique about the game idea of **Delta Wing**. It's a 'war in the air . . . blah, blah, blah . . . jet fighter to defend the bases . . . blah, blah, blah . . . land to refuel . . . bomb their bases . . . blah, . . . blah. In short, an everyday tale of shoot 'em up flight simulators.



As to the graphics, well they look more like paper darts than MiG fighters, with their wire-frame 3D effect, and if the bases are marked as diamonds on the map that's because it's all they are on the ground.

If you can forgive it this multiplicity of failings and treat it as an arcade game it plays reasonably well, though I was fascinated to find how easy it is to actually ram another speeding jet!

Now we return to the USP and this game has one. Boy, does it have one! If you can find a Spectrum-owning friend and you both have Interface I and separate TVs, then you can indulge in true one to one combat with each of you getting your own cockpit view.

It's a novel touch and one that I'm sorry to say I was unable to test because . . . I've not got a friend! If you're more privileged than me in this respect it's probably worth the three pounds for a unique experience.

Jerry Muir

Publisher Mastertronic
Price £2.99 **Memory** 48K
Joysticks Sinclair, Kempston, Fuller, AGF/Protek
★★★



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Amstrad-Sinclair deal



Sinclair bows out

John Gilbert assesses the achievements of the man who created the home computer boom

NO-ONE would question that Sir Clive Sinclair single-handedly created the British home computer market.

Without his sub-£100 micros the Commodore 64 might still be £350 and Amstrad certainly wouldn't ever have become involved in home computers.

Yet, following the announcement of the take-over of Sinclair Research's home computing interests by Amstrad, Sir Clive now looks certain to bow out of the market he was instrumental in creating.

The brilliant technical career of Sir Clive Sinclair started when he was still at school but Sinclair Research, the computer company — his third attempt at a high-tech firm — was not founded until July 1979.

The ZX80 was the company's first computer launched in January 1980 with a for then unheard of one kilobyte of memory. The machine had a flat membrane keypad and the now famous single keyword entry method for its Sinclair Basic programming language.

The computer was an instant success. In kit form it cost £99.95, while an assembled version was £75.95.

The second leap was the ZX81, launched in March 1981. It had a membrane keyboard like the ZX80 but with a more complex version of Sinclair Basic and cost £69.95.

The Spectrum, launched in April 1982, was an incredible coup for Sir Clive. For the first time, here was a powerful computer with enough Ram for serious applications and the ability to produce colour graphics, all for under £200.

Sinclair Research initially sold the Spectrum by mail-order only. As became the pattern, it was a disastrous operation which left early purchasers waiting two months for delivery. The early machines were operationally quirky and many of them were returned by customers. The pattern of late deliveries and unreliability had begun to emerge.

Notwithstanding, the machine was outstanding value and quickly became the top-selling home micro.

Clive Sinclair was knighted in the 1983 Birthday honours list. Prime Minister Margaret Thatcher saw in Sir Clive a technological innovator and almost overnight Sinclair Research became a flagship for British high-tech electronics and innovation. By Easter of the same year Sinclair Research was selling an incredible 12,000 Spectrums a week. In July the ZX Interfaces One and Two were announced together with the ill-fated microdrives.

Microdrives — one of Sir Clive's pet projects — were badly savaged by the press. They initially took longer to load software than cassette tapes, the tape loops stretched corrupting information stored on them and the drives were unreliable. Interface Two, with its Rom software capability and dual joystick ports was similarly ill-fated. It was withdrawn from the market within two years and only a handful of Rom-based games were ever produced.

In January 1984 Sinclair announced the QL, which should have been his biggest triumph. Instead, in a desperate hurry to beat the launch of Apple's Macintosh micro the QL was rushed out in an only partly finished form. The machine shown to journalists at the launch was hardly a QL at all; certainly the operating system on view written by GST was quickly replaced by a Sinclair commissioned OS called QDOS, widely held to be inferior.

When machines finally arrived four months after the launch they were bug-ridden and, incredibly, half the operating system was left hanging out of the back on a hastily constructed Eprom board.

By May Sinclair Research had accumulated £5 million for 13,000 QL orders of which only a few hundred had been delivered. Sinclair offered incentives to customers, such as a free RS-232 lead, but his reputation had been seriously damaged.

A reliable working QL did not appear until late summer of 1984 by which time Sinclair had been criticised by the Advertising Standards Authority and hounded by customers.

Eager to please his critics the next machine — the Spectrum Plus — was only announced 24 hours before it appeared on WH Smith's shelves.

In October 1984 Sinclair Research unwittingly signed its own death warrant. Distributors had wildly overstocked with the Spectrum Plus at Christmas and, when the market nose-dived in January, Sinclair Research became desperate for money, just when nobody wanted to re-order.

The planned stock market flotation was cancelled and Sinclair looked for partners to help him weather the storm.

The launch of the C5 in January 1985 did nothing to bolster Sir Clive's reputation. Generally reckoned to be a cranky idea it branded him in the media as a kind of 'mad boffin'. Sure enough, Sinclair Vehicles was soon in trouble, production was quickly scaled down and stopped.

The storm clouds were gathering but a saviour seemed to be about to step aboard the by now pretty unseaworthy Sinclair ship. Robert Maxwell boldly announced a takeover of Sinclair Research during the summer — by the autumn, though, the Maxwell board had rejected the move and Sir Clive was once more on his own. These were difficult months. In October 1985 he was able to put a financial rescue package together which satisfied his creditors, which by now included Thorn EMI, Timex, Barclays Bank and AIB Electronics. Sinclair repaid the larger part of his debts over the Christmas period through a £10m bulk purchase of Spectrum Pluses by Dixons and by February at the launch of the new 128K Spectrum, Sir Clive was predicting his company would again be the jewel in the British Computing crown. Sadly, that was not to be.

Less than eight weeks later, on April 7, at a hastily called press conference, an understandably subdued Sir Clive handed over all marketing, production and distribution rights to his computer products to his arch rival Alan Sugar at Amstrad.

The whole business he had built up over seven years, turned over lock stock and barrel for a mere £5 million.

In one sense it should have happened sooner — Sir Clive would be the first to admit he is not a marketeer. His enthusiasm is fired by the initial development stages of a new product. Once the design is finalised he loses interest.

Although he will be greatly missed by the home computer world, in a sense, he had already long since left it. After all he'd done it all. The Spectrum had already proved to be the top selling machine — even now it commands over 40 per cent of machines sold. And he had begun to devote his attention to wafer scale chip construction, TV technology and communications.

Yes, sometimes his products are ill conceived. Often they have tripped up through being launched too soon. But his great strength is always to approach any problem with an open mind. To constantly stand each challenge on its head, turning it until a new solution is found.

Clive Marles Sinclair: born 30 July 1940

1958 *Leaves school. Editor Practical Wireless*
1961 *Formed Sinclair Radionics*
1962 *Microamplifier — smaller than a half-crown. Joins MENSA*
1964 *Sinclair logo appears for the first time*
1966 *Microvision TV (£99.95). Chris Curry joins*
1968 *System 2000 complete hi-fi system*
1972 *First calculator — Sinclair Executive (£79.95)*
1973 *Cambridge calculator (£29.95). Nigel Searle joins*
1974 *Scientific calculator (£29.95)*
1976 *First problems. Black Watch launched. Company loses £335,000. NEB buys a 43% stake for £650,000*
1977 *Collapse of calculator market. NEB injects further £1.9m. Black Watch scrapped*
1978 *£2m loss. First microcomputer designed and sold to Newbury Labs. Emerges two years later as the New Brain.*
1979 *Sinclair splits from NEB. Sets up Science of Cambridge with Chris Curry. Mk 14 kit micro. Curry splits off and sets up Acorn. Sinclair sets up Sinclair Research.*
1980 *ZX80 (£99.95)*
1981 *ZX81 (£69.95)*
1982 *Spectrum launched 16K (£125) 48K (£175). 300,000 ZX81s sold. Turn-over up to £30m*
1983 *Spectrums sell at 12,000 a week. Microdrives (£49.95). Sinclair is Guardian Young Businessman and is knighted in the Queen's Birthday Honours. Flat Screen TV (£79.95)*
1984 *QL (£399). Turn-over up to £77m. Floatation of 10% values Sinclair Research at £134m. Spectrum Plus (£179)*
1985 *C5 launched by Sinclair Vehicles. Cash crisis at Sinclair Research. Maxwell steps in, and out. £10m raised by sale of Spectrum to Dixons*
1986 *Spectrum 128 (£179). Amstrad takes over computer business. Sinclair moves on.*

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Spectrum/Spectrum 128. Kempston Mouse + Art Studio: £69.95.

DESERT RATS 48/128

"An example of what computer wargames should be about and sets a new impressive standard for others to follow." (Sinclair User 03/86)
"A truly massive game that strives to retain every historical point of accuracy . . . a superb game." (Crash! 03/86)
"If you've steered clear of strategy games until now, this game could make you a convert." (Your Computer 03/86)
"A most impressive package and, like 'Arnhem' before it, a good place for the as yet uncommitted to wargaming to begin." (Popular Computing Weekly 01/86)
Spectrum 48/Enhanced Spectrum 128 game on side B. (CCS) Cassette £9.95.

NEW 1986 HACKER'S HANDBOOK

"An extremely useful handbook for anyone with a modem who wishes to explore a bit further than the pages of Micronet." (Sinclair user)
"Those responsible for distributed systems would be well advised to read this book." (Which Computer)
"The ethics aside, a very good read . . . clear and uncomplicated and the author's enthusiasm for his subject carried me through the technical bits that were over my head. Well worth buying." (ZX Computing)
168-page paperback is expanded, updated version of last year's best-seller.
Amstrads/BBCs/Spectrums: NEW Hackers' Handbook £6.95.

BORED OF THE RINGS

"An excellent and vast parody . . . I would rather spend months unravelling 'Bored' than days on a self-important serious epic." (Popular Computing Weekly)
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"The jokes are rather like those found in college magazines, with Fordo living in Prickhollow, travelling to Whee, visiting the Whiffy mountains and hiding from a horse and rider who farts (don't let Fordo fart or he makes everyone explode." (Home Computing Weekly)
Spectrum/Spectrum 128 (Delta 4) Cassette £6.95.

"Quite simply, you're the best". *(G. Murrow, Edinburgh)*

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"If you have a microdrive, the Microdriver is the most important piece of hardware you could buy." (Sinclair User 11/85)
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"A very easy means of creating graphics . . . combined with the excellent 'Quill' it enables a lot of people to design outstanding adventures without too much technical knowledge." (Crash! 03/86)
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'SLOMO' will also let you perfect your programs, by debugging at slow speed, viewing graphics pixel by pixel, and hearing sounds form note by note.
Spectrum/Spectrum 128. SLOMO Speed Controller: £14.95.

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The most responsive joystick there is: with no base to break!
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(C. Green, Dorset)

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"A spectacular simulation which handles like a sophisticated 3D arcade game . . . one of the best simulations on the market." (Sinclair User 05/86)
"The game is gripping, packed with atmosphere and genuinely addictive . . . probably the only chance most of us will have to get behind the wheel of a Lotus, so we could say it's worth it." (Computer & Video Games 05/86)
Choose from 4 realtime cities in your 3D race against the drug dealers: 4 skill levels: SAVE HIGHSCORE table to impress your friends.
Spectrum/Spectrum 128. Cassette £8.95.

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"An exciting simulation . . . plays fast and a game lasts no more than an hour or so. while wargame fanatics may find it too simple for purist tastes, it's nevertheless lots of fun, fairly realistic in its results and ideal for inexperienced wargamers." (Sinclair User 01/86)
"A slim but excellent manual which many conventional wargame companies would do well to examine . . . the scrolling is smooth, far superior to other games of this nature . . . this wargame is fast, playable and deceptively complicated. Designed with a care rarely encountered in computer wargaming." (Amtix 02/86)
WATERLOO. (Lothlorien) Spectrum/Spectrum 128. Cassette £9.95.

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"One of the easiest to use . . . it supports just about every action you could want to perform on a text document . . . one of the most complex word processors on the market for any machine, but the use of pull-down menus and the extensive HELP facility makes it one of the easiest to use . . . SofTechnics can be justifiably proud of itself." (Sinclair User 05/86)
Rave reviews all round for this new word-processor. it is compatible with most printer interfaces and most printers and is really pretty amazing.
THE WRITER. (SofTechnics) Spectrum 128. Cassette £17.95. Microdrive OK.

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Heavy on the Magick

It happened like this. Young Axil, inclined to magic more by temperament than by common sense or aptitude, found himself one night in the Golden Thurible.

This establishment, much frequented by wizards, warlocks and their hangers-on, was renowned for its potent Icemark Lager, a brew reputed to refresh the wraiths other potions could not reach.

Whatever the truth of that claim, three quarts of the fiery fluid soon loosened our Axil's tongue and he launched into a colourful account of the tale of Master Therion, a Moon Creature and a naive and gullible Elf. Just as he reached the most scurrilous and interesting point a hush fell over his assembled audience. Too refreshed to notice, Axil continued — until, that is, he felt the bony finger of Master Therion himself on his shoulder.

Master Therion, a magician of some note, possessed many qualities. Regrettably a sense of humour was not one of them and, after a short and pungent series of comments on Axil's parentage, filthy habits and features he lifted his finger and threw Axil many leagues across the land of Graumerphy, deep into a complex of dungeons set in the bowels of the earth beneath Collodon's Pile.

These dungeons were, if anything, even more miserable than the castle above them but, philosophically, Axil got up and looked about. There on the table lay a Grimoire, a book of spells, tattered but still retaining a few pages . . . perhaps it would help him escape.

And so you put on Axil's hooded mantle. Heading east you look about warily — this awful place, like most of



You awake in Misery. This is the game start — the text window is blankly awaiting your instructions with your situation shown on the left. Exits, inventory and spells are also displayed in this area. There is a book, looking rather like a tankard, on each table. The Grimoire is on your left and exits lead east and west

Graumerphy, is **Heavy on the Magick**. Who knows what creatures prowl here but one thing is sure — they'll all do their level best to annihilate you before you reach one of the three exits. The key is that your must grow in magic until you are the equal of any power that crosses your path — an up-hill journey with many deaths and rebirths.

Gargoyle's latest is a role-playing text and animation tour de force, set in the classic role-playing environment, a monster-infested dungeon full of treasure



The opening status and options screen. Your current physical strength and experience ratings are shown as well as your magical grade. Choose to realign your status and you can juggle the stamina, skill and luck ratings around but only using the current numbers displayed

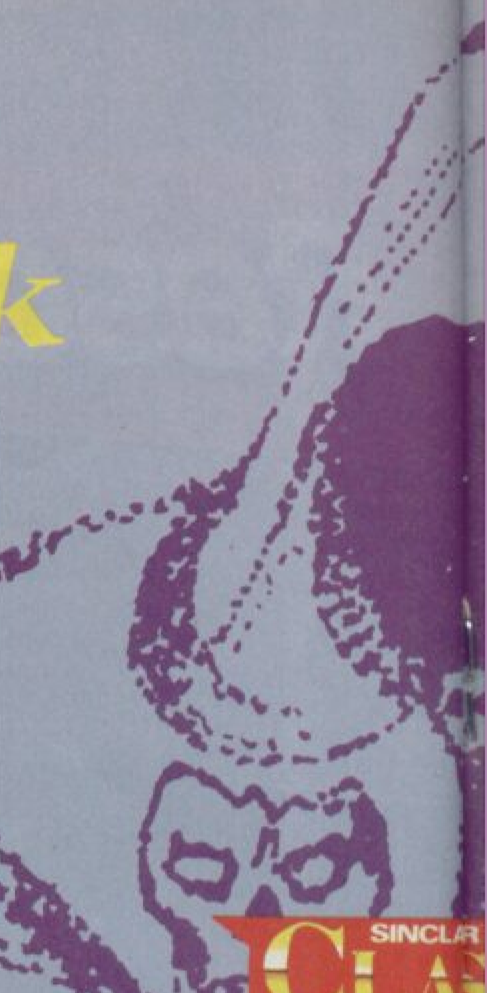
and its guardians, puzzles and traps. Physical prowess however plays no part in the quest and all the combat is magical — hence the title.

The bonus in **Heavy on the Magick** is text, keyed in in Merphish — which Gargoyle describes as a rather terse, even Spartan, tongue, familiar to most adventurers as action + object. The action commands work by single key-press and include the eight compass directions, left or right movement within rooms, examine and pick up/drop. There is also a set of commands to use what magic you have found — *I* to invoke a Demon, *B* to blast a creature and *F* to use a Freeze spell. There are others but you have to find them as you progress. Your chosen command appears in full on the central text window and all you need to do then is add the name of the thing you're interested in



Head up north from Misery and rub out the troll who guards a small cabinet in Trollwynd. The bolt blasts the troll where it hurts, so now you can rifle the cabinet and carry off the Salamander Clasp

A Wyvern pretends not to have attacked you. You can't escape in time and will sink into the floor within seconds. Dead again





Try to impress another troll with your great power and ad... Finding nothing to sweeten his humour or to protect you... you to the Furnace. Capital punishment is in vogue in Grau...

dealing with — though if you're desperate or under attack, you can blast away without wasting time on typing in the creature's name.





The Options screen. Your current physical and experience ratings are shown as well as your magical grade



and accidentally invoke Asmodee, the Great Destroyer. ect yourself, the Great Lord is none too pleased and consigns Graumphy

Speech is also possible and you can converse with quite a few of the monsters. This helps you to get crucial information about items you're carrying or doors you can't pass through — there are many passwords for these and you're only likely to find them by chatting to the dungeon denizens or even to the doors themselves, many of which have pillar-like guardians. Talking to trolls, though, is mostly a waste of time. They have very poor posture and even worse conversation — mainly, unfortunately, of the 'Troll kill Axil' variety.

Still, you do have one friend, the cheery and clumsy ogre called Apex. For some reason he adopts you at the beginning and will act as a sort of encyclopaedia, giving hints on the purpose of objects, passwords and so on. Once you've found a Call spell you'll be able to summon him at will wherever you may be stuck. The Call spell will bring other creatures if you want but I strongly advise you to be very careful — most of the 21 different types of monster are very badly socialised.

One thing to avoid at all costs is getting close to a creature. Physical contact is at least painful and, more usually, fatal as it's very hard to get away from beside or behind a monster. Even, amiable Apex can stumble into you if you're next to his entry point. With a stamina rating of 40 he can do you a lot of damage — especially as he's not too bright and hardly seems to notice he's stepped on your head.

Most of the monsters you'll know from other games. There are baboon-like goblins, wyverns, wraiths, ghosts, vampires and even a medusa and a werewolf. Pretty well all of them are indifferent to your survival and the majority can be openly hostile. They move fast in attack and will do a lot of damage if your reactions are slow.

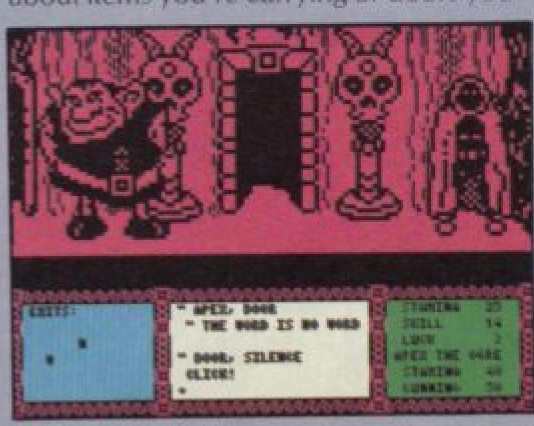
Keep an eye on the exit indicator at the lower left of the screen. This warns you when a monster is nearby and gives you time to move away from that entry point as quickly as possible — at least that way you'll have time to prepare a spell or get out fast by another door.

You can invoke Demons. Four of these are mentioned in the page of Grimoire you carry and all of them have particular likes and dislikes. Your common sense should tell you to collect objects which will placate them if invoked — these may be talismans, plants or jewels. Ignore this advice at your psychic peril because all of them detest time-wasters, fools and silly sorcerers.

According to Gargoyle there are about 280 objects to use and examine, some useful, some hazardous and some downright puzzling. A basic knowledge of ceremonial magic will help with some of the stranger things — a salamander clasp, for instance, will act against heat and fire but what creature might want a block of nougat? Apex may well help but most of the time you're on your own.

Particularly intriguing are the signs — a feature of other Gargoyle games — which hang on many of the walls. Many of these are strange magical glyphs and it's worth checking out the reference books mentioned in the instruction booklet, just in case they're useful to the game. Some have simple interpretations — like the toll sign Apex will reveal to you outside a set of doors. Beware! I'm quite sure one of them killed Axil when I asked him to take a look at it. Dangerous business, this Magick.

Like all good role-playing games **Heavy on the Magick** gives you random stamina, skill and luck ratings. Stamina can be regained by eating but combat will take a heavy toll on your strength and food is hard to come by. If you want to progress in experience points you'll have to indulge in some bolt-slinging and inevitably use up ► 52



You find a key on a table. Demonstrate your newly found Call spell and summon a wraith. It looks at the sign on the wall before attacking . . . aaaaargh! Wrong move



Apex gives a cheesy grin after giving you a very clear hint for a password — the clue is shown on the text window. Utter the right word and you'll be up-graded to Zelator



Still in Wraithville, you find an egg on a rock. Picking up the egg makes the hearth in the centre emit some strange cloud which hovers and pulses. Your pouch being too full, you have to put a bag of gold down on the rock.

51 ◀ your stamina. Never mind — you can save different versions of Axil to tape so the experience need never be lost. These saves will also incude major objects that Axil possesses at that point, thus avoiding having to go all round the course again in a new game.

Axil can also grow in his magical power. He begins as an absolute Neophyte of the lowest degree. Certain achievements move him up the Magicians' Guild status ladder. Having found the password to a particular door I can now boast of my skill as a Zelator though, I've still got another nine grades.

This is a dream of a game to play, not just because it's as involved as other Gargoyle games but because the graphics and text interweave so well, so smoothly and so fast.

Let's be clear about this — these aren't just static location graphics or the sketchy figures of PSS's **Swords and Sorcery.** Axil and the other creatures are well animated,



with an attention to detail which makes you grin with pure pleasure at times. Axil's cloak moves as he walks and, if you tell him to go through a non-existent door, he'll first look for it then turn to you and shrug his shoulders in puzzlement.

Invoke a demon and you'll first see a wisp of smoke. The smoke swirls and grows, finally becoming a vast face taking up almost a third of the screen. Trolls lumber and gawp, ghosts flit about and the goblins lope like apes. Even dumb old Apex has clearly some sort of character. He grins and cocks his head lopsidedly at you, displaying his enormous lungs. And when you die, you subside, surprised but resigned, into the floor to be seen no more this incarnation.

The single key-press system is no more difficult to use than the Sinclair keyword method and provides most of the main commands you would use in a text game.

Here are two genres of graphic role-playing and text interaction are combined to produce a fluid playing style which allows you to use both your verbal and physical/reactive skills. Mastering the text input system won't take you long — just play for half an hour and you'll be ready to begin in earnest. The interpreter reacts swiftly to your commands provided they're coherent, so stay cool if you can — though that can be difficult when you're trying to both blast a wraith and escape at the same time.

Above all, make sure you draw a map. There are 255 rooms in this dungeon, as many locations as in a Level 9 text adventure. That's one mother of a prison to get around by guesswork, and you're in for a whole mess of backtracking and wandering to find out how to use the objects and information you pick up.

This kind of vast exploring game, combined with first-rate animation, has become Gargoyle's forte. There can't be many companies who have so consistent and so excellent an output. What shows through is that Gargoyle themselves relish playing the kind of games they make — you're likely to enjoy them too.

At last graphics and text have been combined in a really satisfying way which augurs well for future games in a similar style.

Further modules and new main adventures are promised, so keep your eyes open and don't hesitate about buying **Heavy on the Magick**. It's a demon's delight.

Richard Price

Publisher Gargoyle
Price £9.95
Memory 48K Also runs on 128K
★★★★★

Look out! Win 150 copies of *Heavy on the Magick* on page 61

Marie Celeste

STOW THEM cutlasses, marlinspikes and other marine miscellania and break out the laser rifles and vacuum suits. The new **Marie Celeste** from Atlantis is no square-rigger. Instead of topgallants and royals she's got ion-pulse plasma engines and double declutch hyperdrives. Perhaps she set out from Titan on an asteroid mining run or preyed off the freight haulers that head out to Mercury. Who knows? All you have to go on as you catch her in your scanners is that she's been abandoned, adrift in space. As you draw closer you can see the Jolly Roger painted on her plasteel hull.

No cause for worry. You're no angel either. The fancy space yacht you 'borrowed' on Sirius IV has run into some bother — as usual the dimethium crystals have got damp, or whatever normally happens to them when they go duff. The main engines are up the spout and the nearest motorway telephone is 12 parsecs away. Your only hope for survival is to board this mysterious space hulk and find some new crystals to power up again.

This then is the plot for Atlantis' latest budget adventure release. There are three aims to the game. First, 12 treasures await your discovery — things like booster spice (remember **Trader**?), diamonds as big as your fist, elixirs of immortality and the like secreted about the ship. As well as collecting the loot and returning it to the utility room near the main airlock you've also got to find your dymethium. And, finally you must unravel the mystery itself — what happened to the pirate crew?

The game is **Quill**ed and attractively presented with economical and fast graphics, **Patch**ed in to appear with the text. Very little filling and shading is used so they draw quickly and don't interfere with the game. A definite bonus — the effect is similar to the pictures in **Subsunk**.

Your first impressions are of a high-tech environment. The sliding doors are operated by card-locks — though there are other locked doors which won't respond to the card you can find fairly early in the play. Storerooms yield useful items like laser rifles, and treasure. There's also a locked safe which may well contain some of the answers you're seeking.

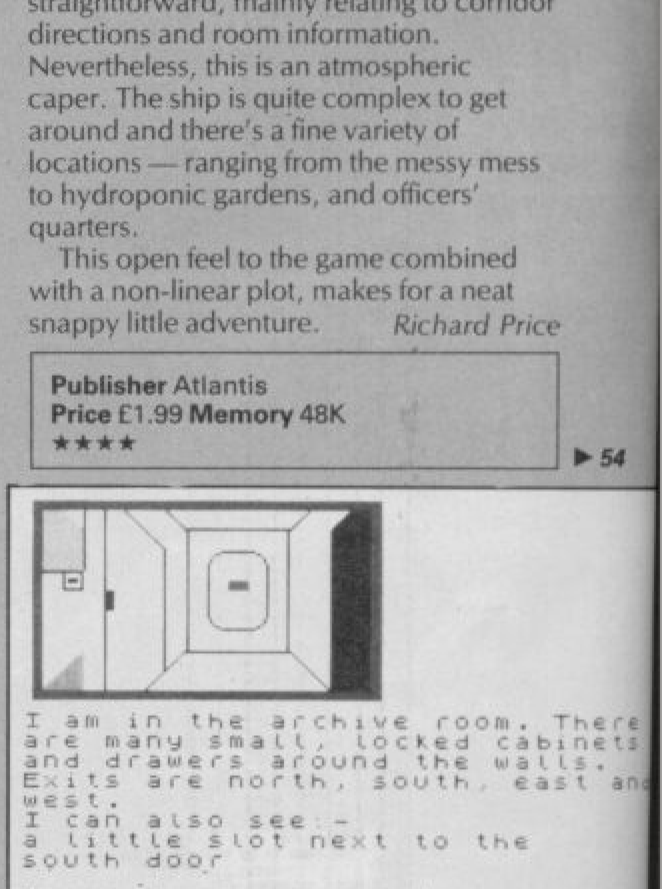
Why the laser rifle? Well . . . the ship may have been deserted by its human occupants but nobody bothered to tell the androids. At least one of them still patrols the corridors. It'll throw you in the brig unless you can vapourise it. But to do that you must first find a card to unlock the hatches to the storeroom, and get the rifle. You may find that you're just too big to fit into some places where you know you need to go. Check your inventory and you'll see that you have an atmosphere tester. If the readings are good you probably won't need your bulky space suit.

The descriptions are fairly straightforward, mainly relating to corridor directions and room information. Nevertheless, this is an atmospheric caper. The ship is quite complex to get around and there's a fine variety of locations — ranging from the messy mess to hydroponic gardens, and officers' quarters.

This open feel to the game combined with a non-linear plot, makes for a neat snappy little adventure. *Richard Price*

Publisher Atlantis
Price £1.99 **Memory** 48K
★★★★

▶ 54



Heavy on the Magick



CONVERSATIONS WITH APEX



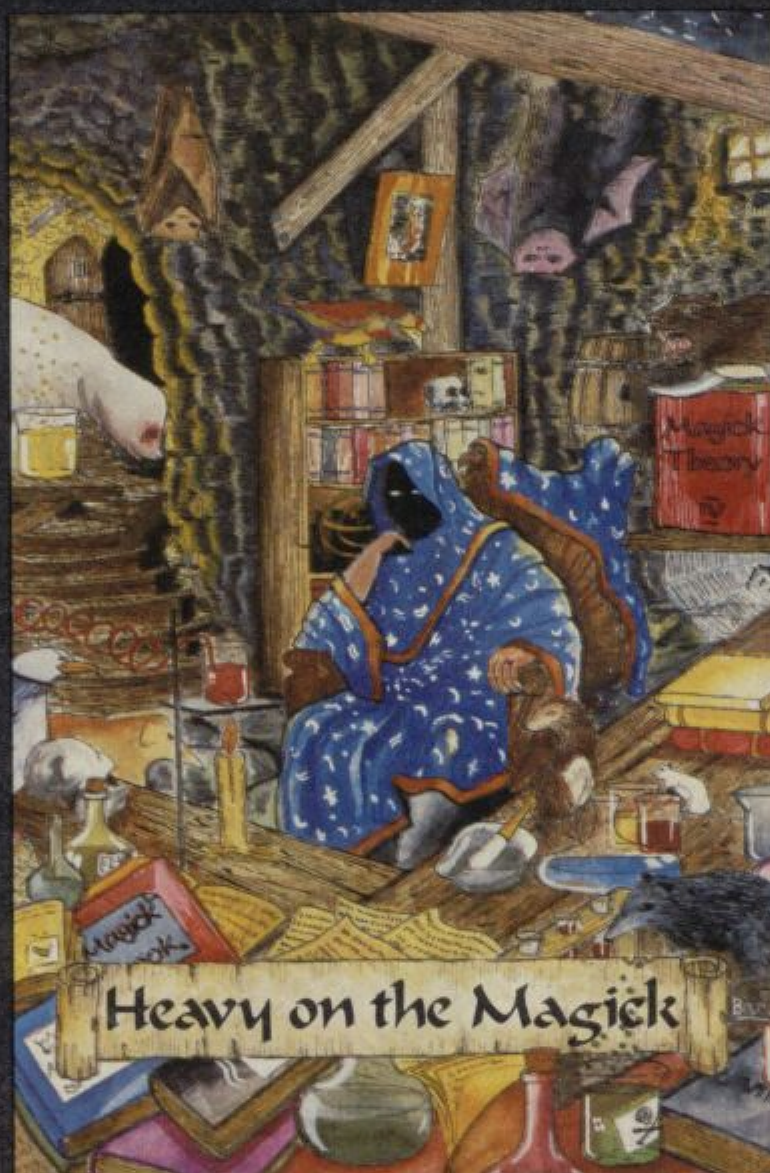
THE DOUBT OF RABAK



OLD TROLL!



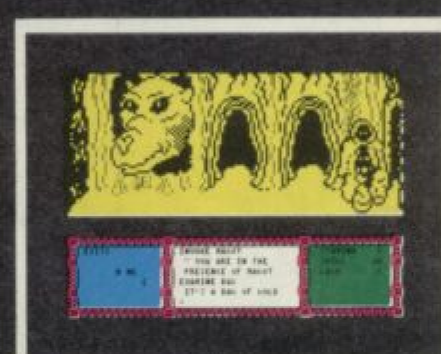
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Questprobe 3



52 ◄ ONCE AGAIN it's time to pull your Y-fronts over your jeans and join more Marvel superheroes in clobberin' the evil opposition into stupefied submission.

Where Spidey and the Hulk have gone before, the Thing and his incendiary chum, Human Torch, now follow in the third of the Questprobe games. Eat your heart our Beyond — how's **Superman** coming along?

For those whose normal reading matter is less lurid a brief explanation is necessary. These two lads are one half of the Fantastic Four (™ as the blurb repeats over and over). The four were changed into strange mutants by an overdose of radiation and now possess special powers — which, of course, they only use to do good. Reid Richards, their nominal leader, can stretch his body like a lump of Silly Putty whilst Torch can become pure fire and project gaseous streams of hot plasma — handy if you run out of matches to light the stove.

Poor old Thing has become immensely strong but suffers from some unfortunate lurgy which makes him look rather like a dinosaur with very bad skin tone. He is understandably touchy about this as girls find him a little too chunky. The fantastic fourth was a lady — as far as I can remember she was able to become invisible.

The adventure stars only Thing and Torch. Naturally, such superheroes would be rather wasted on ordinary felons and their enemies also possess superpowers — which, of course, they only use to do bad. In this game the obese Blob, the evil Doctor Doom in his nuclear powered armour and the entire Circus of Crime are led by the mind-bending Ringmaster. Your mission is to rescue the fair maiden Alicia Masters from the evil terror of Dr Doom.

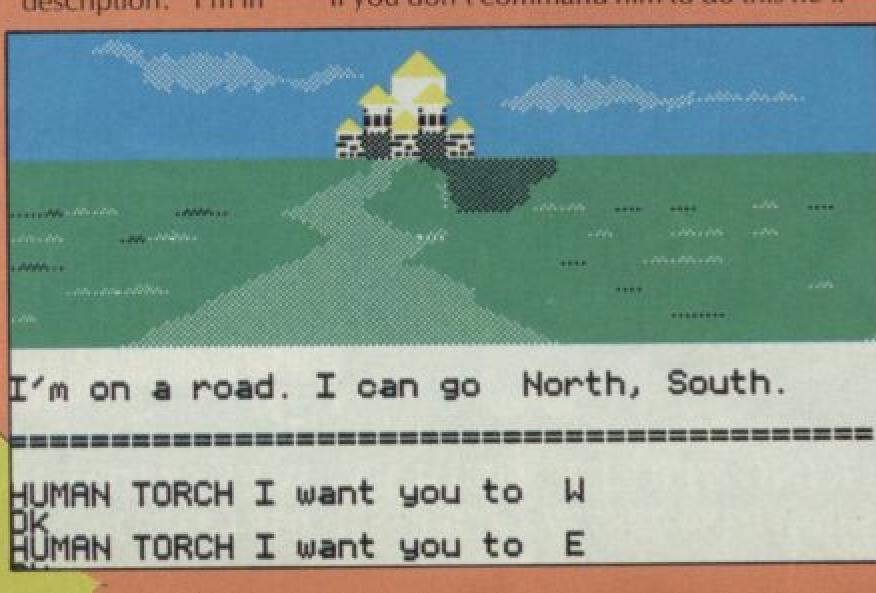
The program is presented in the familiar Scott Adams/ Adventure International format — white screen, bright and speedy half-frame graphics and fairly minimal description: "I'm in the fairgrounds outside Latveria and I see here a circus tent. I can go north." You can become either of the superheroes during the game and will find it useful to switch from character to character throughout the action.



There are only about 12 immediately available locations at the beginning of the game and, because there is a time limit, very little exploration is initially possible.

What's the problem . . . ah well, Thing has become trapped in a giant tarpit near to Doom's castle and will drown unless you can find the means to rescue him. I strongly advise you to read the instruction booklet very carefully before you start. There is a considerable amount of detail about the powers our heroes possess and you'll be entirely in the dark about how to save Thing unless you've read up on them. Even afterwards you will probably find it extremely hard going.

The first Thing (sorry) to realise is that Thing can hold his breath for a long time. If you don't command him to do this he'll simply suffocate after about twenty inputs — at this point the game ends and you have to start all over again. If he's holding his breath he'll be able to survive until he reaches the bottom of the pit. While he's sinking it seems to be almost impossible to instruct him to do anything except wait — this for about 17 moves. Finally, he'll be able to "feel ground" where there's some machinery to smash and a dark hole with air in it.



Meanwhile as Torch you can flit around getting handy objects like gunpowder, a candle and a purple worm. If you close your eyes you can enter the circus tent too and collect a cannon — you need to close your eyes to avoid the effects of Ringmaster's psi-powers. Even getting this far took me many, many attempts, all resulting in restarts to try different ways to get a working light-source to Thing before he slipped beneath the tar — nothing logical seemed to work, even weird ideas like firing the purple worm out of the cannon into the pit. It wasn't possible simply to fly above Thing and give him the worm, which may well be a glow worm. He'll take the candle but of course that goes out in the tar.

Part of the problem for me was the way the program responds. On every input there's an OK statement whether or not the action was successful. Sometimes the interpreter will tell you you can't do things but at others you'll fihd that you've entered a string of commands which get no adverse comment, all to no avail. Even an 'I can't' would have been more helpful.

The interpreter also behaved oddly at times — at one point I was flying above the pit with my candle and asked Torch to do something with it. He simply denied he had it though an inventory check told me 'OK I'm carrying a candle.'

With this and other minor irritants I ended up being downright frustrated rather than entertained. The lack of full descriptions adds to this feeling, as does the lack of any hint facility — you're told to buy a Scott Adams booklet if you need any help. All money in the bank, I suppose.

To be honest, compared with the super-friendly interpreters of Level 9 games or even the basic **Quill** responses, this well-worn Scott Adams style seems rather primitive and took my attention away from the game itself. The only thing I wanted to clobber was my Spectrum.

All told, a fairly inaccessible game opening with a linear set of problems in a closed set of locations. Unless you're smart enough to get through this in one or two goes you may well end up feeling cheated and disappointed.

Marvel Comic fans will probably ignore everything I've said but, if it was my pocket money, I'd get myself something friendlier like **Worm in Paradise** or **Heavy on the Magick.**

Richard Price

Publisher Adventure Soft/US Gold
Price £9.95
Memory 48K
★★★

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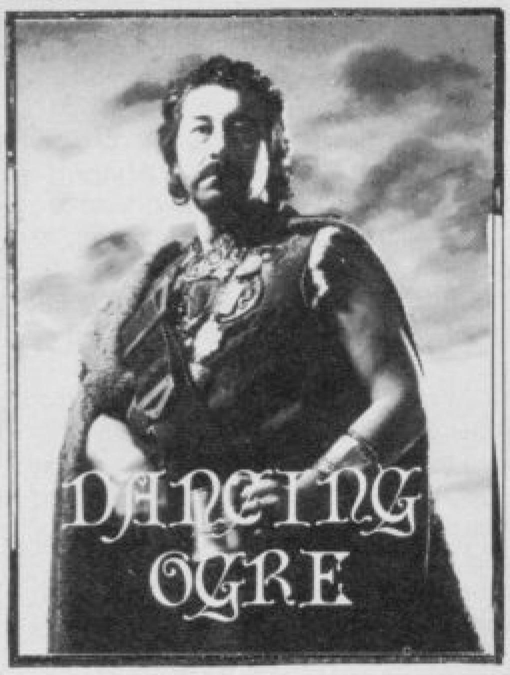
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Adventure Helpline

Gordo Greatbelly, landlord of the Dancing Ogre, offers help to lost adventurers

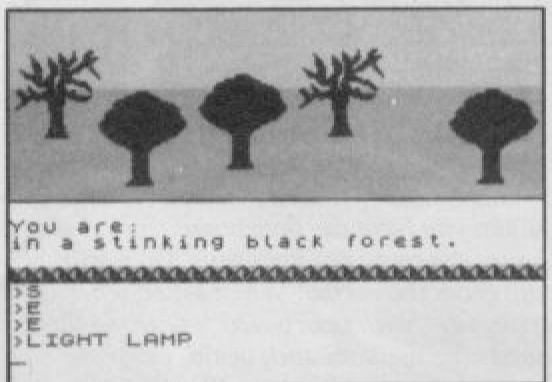
I SHALL not distress you too much by recounting the full horror of the final stages of our trek to Imperial Maru. Suffice to say that many travellers in our convoy, forced into poverty by enforced purchasing of desert trinkets from the noble Guardians of the Sands, preferred to face the terrors of the open desert rather than suffer more from what the Guardians described as 'market force'.

The leader of the Guardians, one Tebb-Ett, had devised a particularly refined form of this economic torture. First he gathered the groaning wanderers together for, he claimed, a cheerful song about the night-time fires. Then, while his men plucked at one-string viols or thumped drums made from the skulls of defunct travellers, he howled 'The Desert Song' — a traditional ditty describing the search of a love-lorn camel driver for his favourite she-camel. To add authenticity to the tale he thwacked the rump of his own beast in syncopation to the 'music', thus adding its indignant roars of pain to the searching harmony.

Many of our company hurled their entire stocks of gold pieces into the proffered hat in an attempt to stop the entertainment. Others perhaps of a more sensitive and musical disposition, seemed to become mad and run off into the desert night never to be seen again. I can only offer thanks to Ithukk that I was born tone deaf.

My only solace in this sandy hell was my conversations with other hardy travellers who, like me, were equipped by years of hardship to survive the rigours of the place. A Knight Errant of great prowess, Sir Martin de St Bernard, has come to the rescue of poor folk such as Pidden of Bristol and The Tappin of Kidderminster, two amongst the many who seek to vanquish the Knight who says 'Nic' in their **Quest for the Holy Grail.** "Behold," says he, "verily they should give unto the Knight the Pink Shrubbery. Then he will utter 'Cin' and safe they will be. The Pink Shrubbery may be found in the kitchens at Camelot. But beware! Give not the shrubbery if thou bearest the Holy Hand Grenade, for evil may come of it."

Sir Martin has provided me will a full solution to the Quest, for which my thanks, and offers other tips. To enter Camelot you travellers will need the key and, to pass the guard, the Baseball Glove. This may be found at the cesspit, an aromatic spot beloved by Zul and Zel. The door of the place will close on you unless you have a wooden wedge which will be



Quest for the Holy Grail

found in the cave near the river. Steer clear of the Knight with Three Heads if you have this item — he will eat it.

Now that 'Nic' need be uttered no more, assist Sir Martin in solving the **Murder at the Manor**. He cannot leave the village to begin the hunt though he carries a hut key, a trap, whistle and knife. He cannot unlock the gate or follow the hill path. Your letters please to Sir Martin Roberts, St Bernards School, School House, Rating Lane, Barrow-in-Furness LA13 9LE.

Others, like Urban the Urbane of Parkhurst, South Africa, and O'Callaghan the Hammer of Harsewinkel, Germany have become enmeshed in the machinations of **The Fourth Protocol.**

Urban has expended many fruitless hours and lost many watchers in following



The Fourth Protocol

the man Thorn, after being pestered by the tedious Bracton to do so. It is not Thorn whose mental instability is a risk, but Bracton's. Take your watchers from Thorn and place them on Bracton. This surveillance will uncover Bracton's goatish secrets — you may then call up Medical Security who will dispose of the nuisance. Magic, preferably black, will do the trick. My only daughter, Clarinetta Greatbelly, revealed this to me many moons ago. It is worth a few points.

There were other terror-struck travellers



who told me that the trip to Maru was as nothing compared to a holiday in **Terrormolinos**. Johnston of 3 Ballyhannon Heights, Portadown, Co Armagh, Northern Ireland could not even enter the taxi to take him to the airport, despite having the camera, tickets, Beryl and Ken. Clearly he has forgotten his wayward offspring Doreen who must also go to Spain

She tends to spend much time in the bathroom, and Johnston should call her when he has assembled the other members of his family. Johnston also offers a full solution to both parts of **Lord of the Rings.** He has obviously learned much from Tebb-Ett on our journey for he asks £1 as a fee. Reply at your own risk to this offer.

John Le Poidevin and Ian Le Boulanger of Eleuthera, Port Soif Lane, Vale, Guernsey, Channel Islands offer more economical help with **Terrormolinos**. For 20p and a stamped addressed envelope they will give specific answers or a complete list of correct photos.

They provide these clues as tasters. "Always remember to lock the steps before climbing them. Saying 'switch on' will help you see the light when in the attic. Now onto Spain and the monastery. Before returning to the hotel Mr Snargsby has to be rescued from the catacombs by going down, north-west, calling him and then retracing your steps. Finally, one photo must be taken in the presence of an unexploded shell." Let's hope these hints will ease the pain of your vacations.

From pain to Payne the Unshadowed of Redland, Bristol. As we baked in the heat of noon he confided in me the full solution to **Mindshadow.** I give you the first part and, more especially, as an aid to Long John Lewis of Brixton who cannot sever the anchor chain aboard the pirate vessel.

"First," says the Payne, "take the shell on the beach and then head north and east to collect the steel from the boat, the straw from the hut and a vine from the jungle. Go east from the beach until you reach the cliff. Tie the vine to the rock and make sure you drop all you are carrying. Climb

► 58



57 ◄ down and enter the cave when some digging will reveal a map and some rocky rubble. Both should be taken. Go back up and take all your belongings. Follow the directions shown on the map from the hut and you will find a bottle of rum by a wreck.

"Now return to the beach and bang the rock with the steel. This will start a fire and bring the pirates to your rescue. You can buy your ride with the bottle of rum. Once aboard go north, west and south, and



Mindshadow

punch the crewman who blocks your way. South from here you will be able to get the meat cleaver which can cut the anchor-chain. Once this is done the Royal Navy will appear off the starboard side and you can board the warship. "The second part has more meat in it but the quest is easy enough." For £7.99 this is just not good enough!" moans Payne in justified dudgeon.

Daniel Dungeondoom of Lincoln Street, Gainsborough pulled up his mount beside me as we rode, saying, "Listen, I haven't a clue how to get through the westward door in Sheslob's Lair in **Bored of the Rings.** How the heck can I do it?"

Briefly I told him that all the treasure you can carry is already available at this point in the gloomy halls. The door to the west is, as far as I know, utterly impassable and put there by the devious McNeill purely to strain your brain yet further. So ignore the door. From here you should really head east to the path and the guntower where you should shoot the flying pig.

Those of you still submerged in **Subsunk** could do worse than drop a prepaid line to Ardy Bird of 30 Watermill Close, Selly Oak, Birmingham B29 6TS. He will answer specific questions on the game. If **Red Moon, Hampstead** or **The Hobbit** have you by the heels, one Scalthor the Holy Advenger will aid you if you enclose either two gold pieces or 50p to cover post and photocopying. Direct your enquiries to Scalthor at 49 Newtown Crescent, Dunblane, Perthshire.

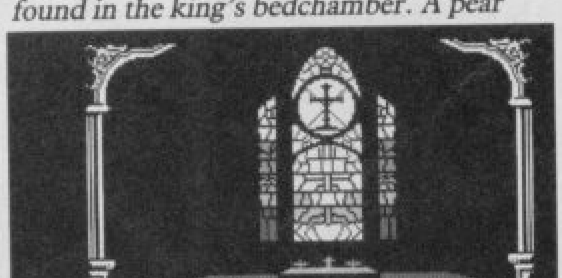


The Hobbit

A truly long-distance adventurer, Moonwalker Moore of Kaitaia, New Zealand has snapped his nerves attempting to recross the ravine in **Planet of Death**. When you have the floorboard from the house the sequence goes thus. Go north and cross the ravine. When asked what with, say "with floorboard". Once in the shed take the laser and, again, cross the ravine — "with floorboard". No more than that to soothe those jangled nerves.

Poor Moonwalker also expects to attain **Hampstead** without plumbing the depths of the industrial estate. There is nothing for it but to gather many objects and map the maze — without the lathe **Hampstead** will be forever out of reach.

Zardo Sergio of Uboldo, Italy seeks any help he can get with **Heroes of Karn** to get him started. So then, use the bible from the monastery to kill the barrowight. Kiss the frog in the marsh to reveal Beren who is handy with swords and birds. If you wish to get the map and shovel, seek them in the pirate's cave — the pirate can be disposed of with a dagger found in the king's bedchamber. A pear



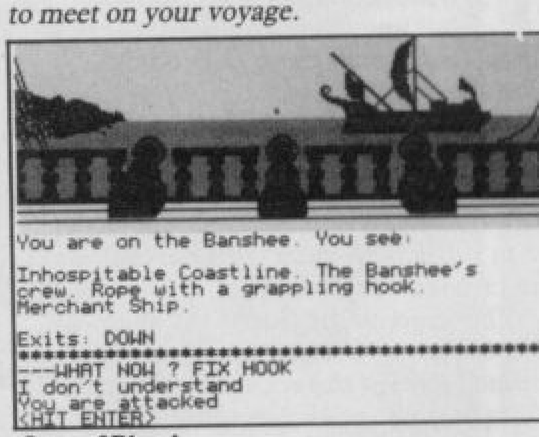
Heroes of Karn

can be found in the clam but to open this you will need a crowbar from the toolroom. And if you wish to pass the bear, feed him sweet honey from a cellar. Zardo claims to have solved **Spiderman** and, if you wish to correspond, write to him at Via IV Novembre N.24A, 21040 Uboldo, Varese, Italia.

There are some who still roam **Valhalla.** Jason the Carpenter of Omdurman, Southampton has taken Ofnir and Drapnir but is now unable to locate Skornir the Shield. To the best of my recollection I believe this lies in a remote part of Hel, a region of caves and pits. This is accessible only by ringway from an area of Midgard which is found north of the mountains of Midgard — you must be carrying Ofnir to go north here. Ring-jump from here and you will find yourself in a cave in Hel — the shield should be three locations east of here.

As we reached the irrigated lands of the central desert near Maru, Garlick, the Cloven of St Judes asked how he could use the crowbar and pickaxe to explore the secrets of the stove in **Eureka's** Second World War. If he has all the tools, a home-made uniform and an ID he should go to the showers and move the stove. Then play a record to cover the noise of your digging. Good luck, soldier.

I also received some pleas from a group of forlorn pirates unable to attack other vessels in **Seas of Blood**. Your first task should be to sail east as far as you can, then south till Lagash appears. Now wait until the Barge hoves into view then "attack barge." To board, "go barge." Do your dirty work and then, to return to your own vessel, "go Banshee." This attack process should work with other ships you chance to meet on your voyage.



Seas of Blood

At last thankfully, our convoy glimpsed the golden domes and rearing spires of Maru rising in tiers upon their craggy hill. Beneath the vast walls of the city lay lush fields and glittering canals. Many roads converged on the place and throngs of weary travellers jostled to reach the taverns and eating houses. The stench of the city was magnificent; spices, camel dung and the aroma of thousands of unwashed citizens. And there, at the very top of the town, my goal — the marble palace of Janga Ibn Janga, Lord of the Spice Road and Prince of the Land of Hidden Water. I near wept with relief — till I thought of what he might have in store for me. Till next moon, my friends. Farewell.

Greatbelly

Gordo Greatbelly, Landlord

If your have a tale to tell, or are in need of a helping hand, write to the Landlord of the Dancing Ogre c/o Sinclair User, Priory Court, 30-32 Farringdon Lane, London EC1R 3AU.



TIMETRAX

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In case of difficulty this game is available from Argus Press Software.

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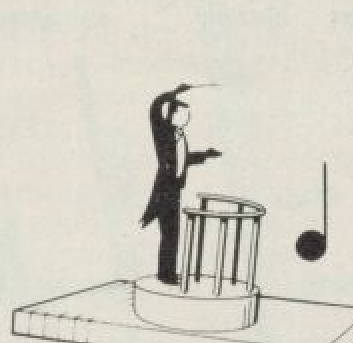
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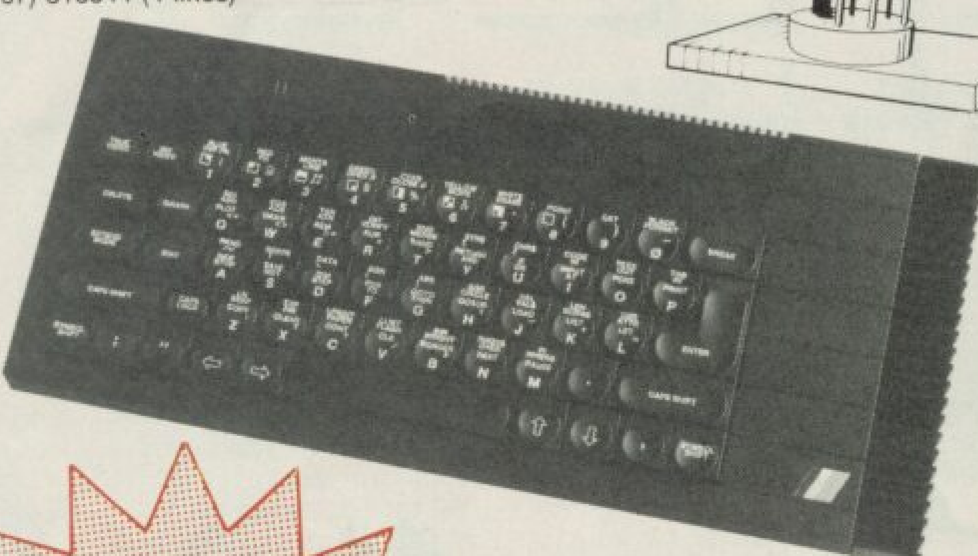
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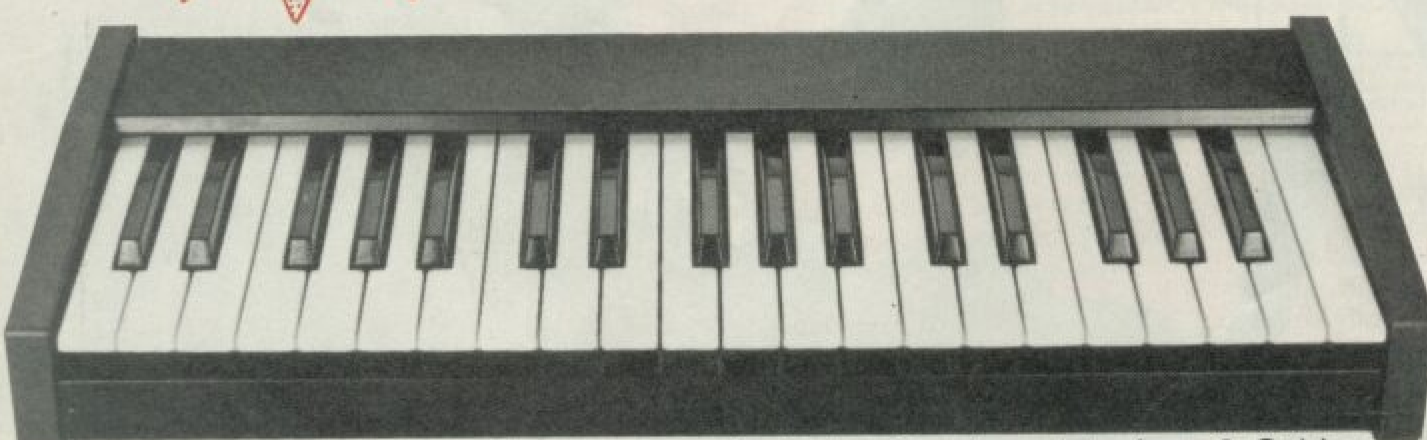
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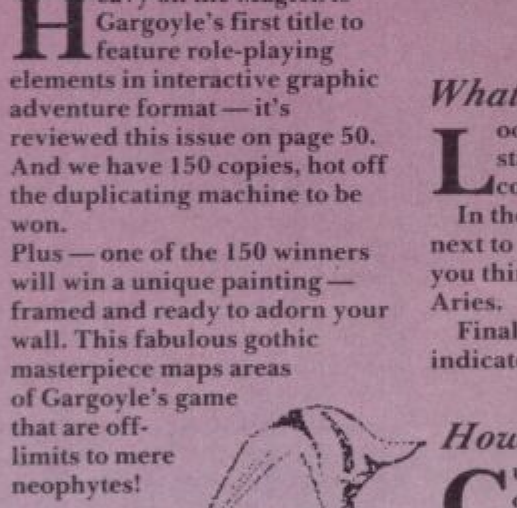
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Heavy on the Magick is Gargoyle's first title to feature role-playing elements in interactive graphic adventure format — it's reviewed this issue on page 50. And we have 150 copies, hot off the duplicating machine to be won.

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Good luck for Friday 13th!

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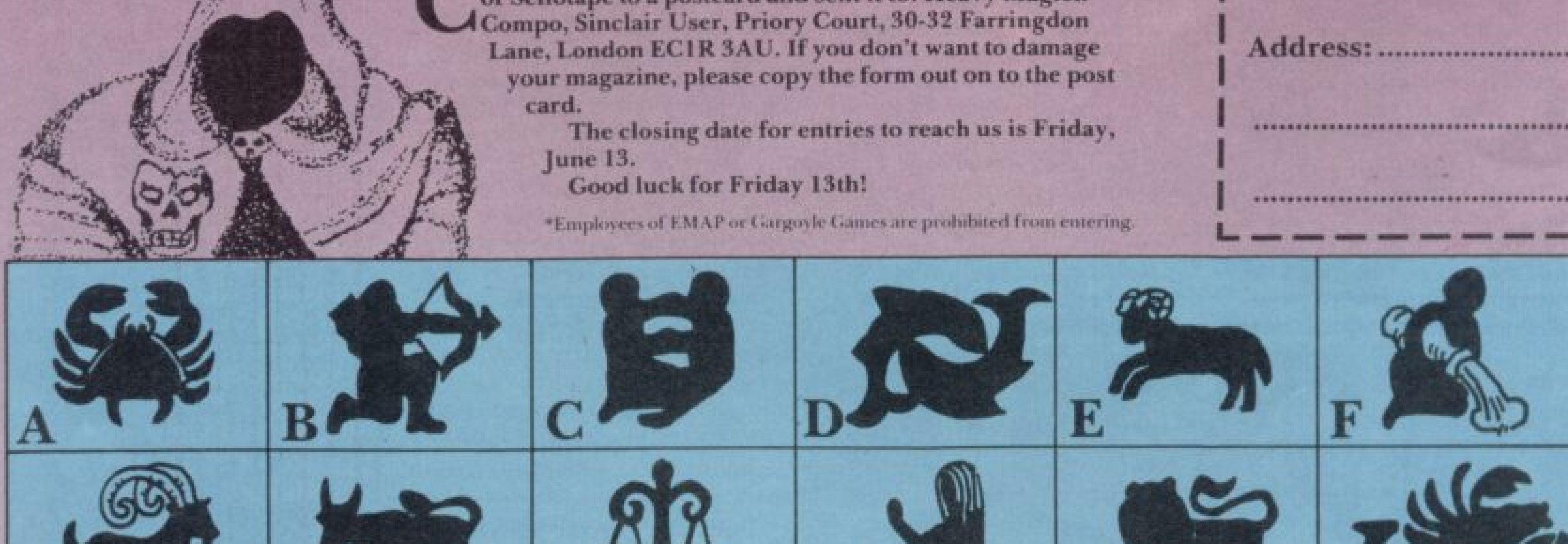
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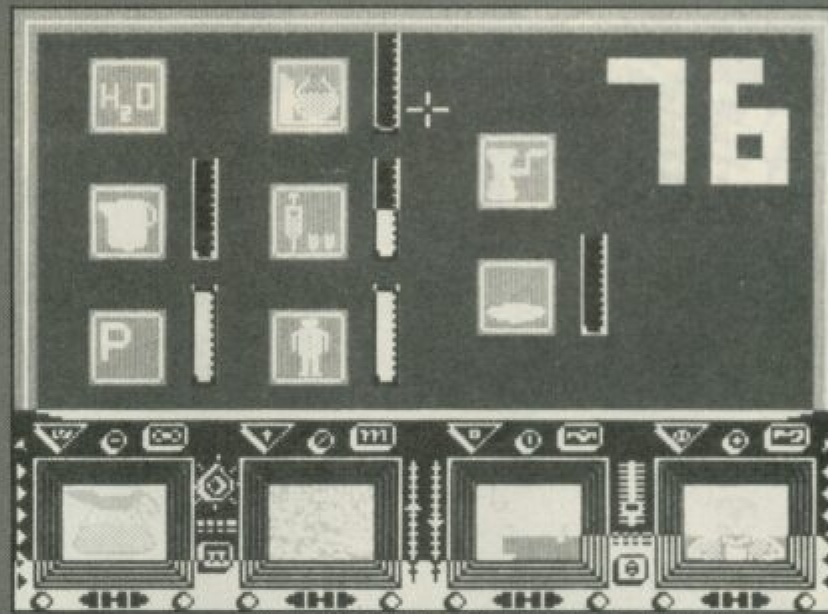
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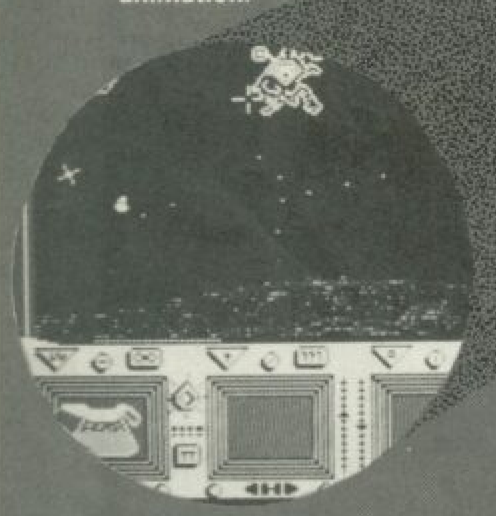


Comet Game



Firebird's gift for timing is impeccable. Just when all the fuss has died down and everyone's almost forgotten about Haley's Comet out comes Firebird with The Comet Game. Not only that but Haley's Comet serves only as an excuse for a space arcade bash.

A manned space flight is on its way to the comet. Why? Well here's where Firebird really have gone doolally. Apparently the comet's tail is made up of germ bags, full of yukky disease, which are threatening to contaminate the Earth as the comet shoots past. And the astronaut is on a mission to save the world from this great infection. Being a longish trip the astronaut is being kept in suspended animation.



The object of the game is to control the space craft's on-board computer during the flight and keep its human cargo alive. Attention must be given to four tasks: keeping up the ship's defences, maintaining communications with Earth, a bit of self-examination to keep your computer system running sweetly, and, most importantly, the coffee machine mustn't be allowed to get out of control.

The easiest job is correcting the bugs within the computer — a taks called Computer Argument. A column of LEDs — displayed on the left of the screen — must be matched with a pattern of lights on your circuit, displayed on the right.

For some reason, unknown to either us or Firebird, your ship is prone to missile attack. When the warning is given the screen turns black and your ship — which looks like a midget egg timer — is displayed at its centre.

The missiles approach it from the sides of the screen, leaving white trails behind them (vapour trails in a vacuum?) move the cursor to the head of each trail and press fire. The ship shoots photon torpedoes towards the cross hair and destroys any missiles in its path.

As you get nearer the comet the germ bags in its tail begin to attack your life support systems. They tumble around the screen like huge chunks of coal while you try to get your gun centred. The laser beam bores into the soft centres of the bags, spilling their puss-filled contents harmlessly into space. Cute it ain't.

There are several levels of bag destruction. As you get closer to the comet the number of bags you have to destroy increases by a factor of two every time you encounter them. They also move more rapidly as the level of difficulty increases. Don't move the cursor around too much when there are more than three bags. Keep pressing fire and you are bound to hit one of them.

All the time you also have to handle the communications antenna it needs continual readjustment and you must point it in the direction from which the signal from your command base — back on earth — comes in strongest.

The upper part of the display shows the circular dish of the antenna which pans left and right as you move the joystick in the corresponding direction.

The final, and most complex, task is coffee making. The human needs liquid refreshment during suspended animation to stay alive so you must keep the coffee making process going.

The coffee machine looks like a modern office dispenser. First, you've got to grind the coffee, put it into the pot and fill it with water — H_2O. You must then inject it into the human's system and keep the whole process ticking over.

A series of gauges show how well each of the tasks is being performed but the only one you have to worry about is the life support gauge. If the reading drops below halfway on the thermometer-type gauge your charge has had it and the game is over. You might also keep an eye on the P gauge. When its reading reaches the top of the gauge the human's bladder explodes. That's not good.

If you survive the onslaught of missiles, faulty circuits and exploding bladders the ship will enter the vicinity of the comet where the 3D graphics get pretty nifty and the germ bags get really serious. It's all over pretty quickly but it you are used to 3D shoot 'em ups you will be on home ground.

What I can't understand is: If the computer is so intelligent why can't *it* shoot down the germ bags at the comet's core and drink the coffee?

The 3D effects are good but the action is predictable.

John Gilbert

Publisher Firebird
Price £7.95 **Memory** 48K/128K
Programmer
Joysticks Kempston, Sinclair
★★★★

The Tarot

I've always been a softie for astrology, the I Ching and Geomancy, but I still have to be convinced that the subtleties of the Tarot's symbols and meanings can be successfully translated to a computer. The Tarot isn't a fixed science, and interpretation is all.

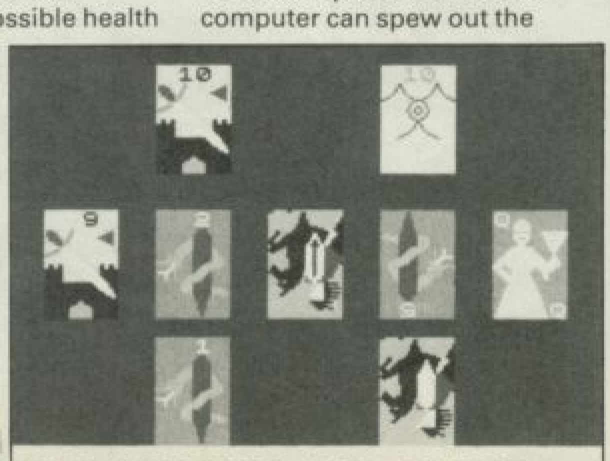
First disappointment. Psychic's package only features the 56 cards of the Minor Arcana which, surprise, surprise, correspond to the values in a deck of cards. The Major Arcana, which includes The Fool, Justice, The World, and Death, is not included according to the authors because of their possible health risk to young children — waking up screaming in the middle of the night, that kind of thing. Sounds like the best bit.

Once the program has loaded you press a key to deal your 'spread' of cards face down on to the screen: different positions within the 'spread' have different meanings. For instance, the card in the top left-hand corner relates to the near past.

Second disappointment. **The Tarot** is hopeless. While the computer can spew out the individual meanings of the cards, it cannot relate them to the positions in which the cards fall, and then sum up the general meaning of the spread to give an accurate prediction. All Psychic manages to do is produce a database of Tarot meanings, and put in some fake gypsy music.

The Tarot is a real missed opportunity. It could have been an outstanding package if it had included a real Tarot deck, a booklet of background information, the Major Arcana, greatly improved graphics of the full Tarot set and a really sophisticated AI expert system to handle the interpretation.

John Gilbert

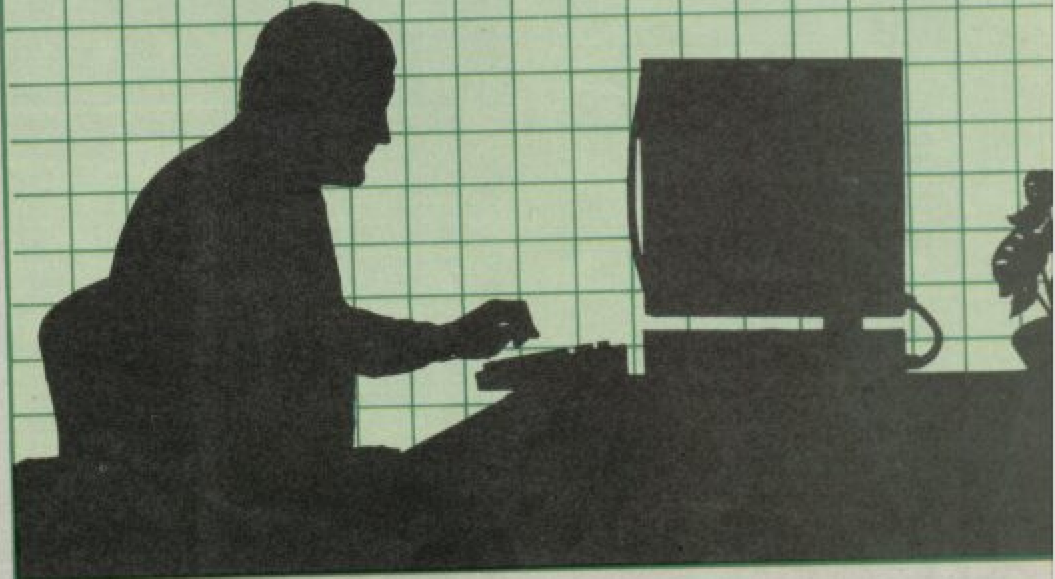


Publisher Psychic Software, 38 Dawn Walk, Liverpool L10 4YD
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Mailist

This is a specially designed database for storing names and addresses, and printing out in label format. Special search routines are included for selecting only names and addresses that conform to your criteria. The famous Gemini 'Searchkey' facility is included with this program, and data entry is simplified by an on screen label painting system. Just type in those names and addresses as though you were using a typewriter!

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One of Gemini's speciality programs, this software will take the drudgery out of keeping stock records. Enter details of part number, description, unit quantity, cost price, selling price, minimum stock level, units in stock, order quantity and supplier details. Detailed reports include totals of stock at cost and sale price, cost of bringing stock up to level specified, gross margin, understocked items, etc. Full browsing facilities to make inventory management a pleasure!

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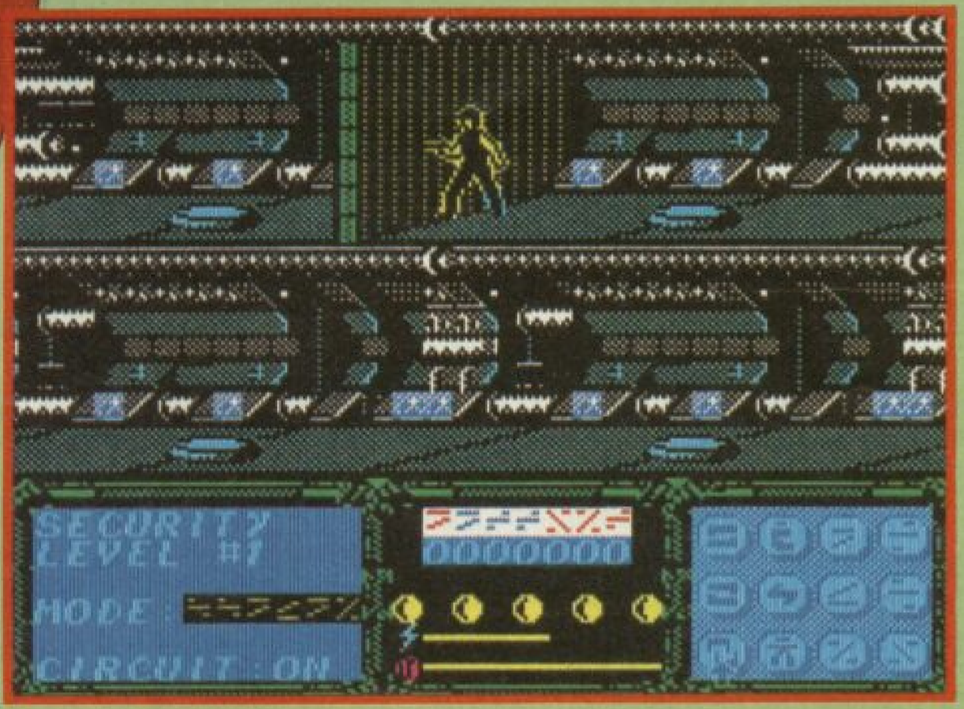
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The six symbols in the Mode window must all be the same to by-pass the security door

The visitors command ship creeps through a slow steady orbit high above the planet earth.

V, the fantastically successful TV mini-series is back in the form of the game-of-the-film from Ocean. The ratings-topping science fiction pulp pap — a wonderfully redundant mix of *Star Trek* and *Dynasty* mashed into a confection of reptile aliens, tangled romances, betrayal and live rodent eating — is perfect micro game material.

If you want to save the world Donovan's your man. This anodyne hero with the Colgate smile can do it. The kind of guy you could believe in to save the human race.

As Donovan you are thrust unceremoneously into a random point in the alien ship's architecture: the plane, level and sector are set by the computer. You carry a laser gun, explosives and a device call a communiputer, giving status info on ship-board activity.

Once you've got your bearings you can move up and down between levels using beamer pads, which look like the tops of toadstools. Most of those will allow you to travel in only one direction, either up or down. Each level is split into sectors, some of which are protected by security doors, and the ship is bustling with a robot population keen on removing you from their environment. Attack is the best form of defence and your laser gun proves invaluable. You only have a limited number of shots though — the fire-power remaining is shown as the first thin bar on the status panel — and gun performance is affected by the electromagnetic fields of the robots.

Four classes of robot patrol the levels. Maintainance robots travel along corridor floors while cleaners float above head level. Neither do much damage but if you bump into them your power decreases. The killers of the **V** ship are the security robots which are armed with lasers. You should take them straight on but you can jump over them and roll to the ground by pushing the joystick up. In that way you can avoid touching the robot and dodge its deadly firepower.

The ship also supports surveillance robots which report your location to Diana, the reptile leader. She will send yet more robots after you so you should silence their inaudible chatter before they get a chance to squeal.

Your primary objective is to destroy the ship. You must set explosives at the water inlet, air purification plant, central computer, nuclear reactor and docking hanger. You can set them in any order but once you have typed in the current time on the detonator you have only 30 minutes before the explosion. In that time you have to set the other charges and escape safely.

Time on the spaceship is confusing: all numbers on the craft are displayed in the reptile numeric system.

The clock which continuously ticks away on the status panel is split into six sectors, two of which are continually up-dated while the other four rotate as time passes. Pretty soon it becomes obvious that six characters depict hours, minutes and seconds. If you safely reach one of your targets — such as the reactor — you prime your charge by fixing the time on the detonator to that of the first four digits of the current time. Detonators are set by pressing down on the joystick which puts the communiputer into operation. A keypad appears at the bottom right of the screen and the main status display, bottom left, is cleared. There are 12 icons on the pad which are operated using an arrow cursor. The first two columns invoke actions such as detonators while the others are marked with the characters of the reptile number system.

To set the explosive device use the icon in the second row, second column.

Your secondary mission is to find the formula for the red dust which kills the reptile aliens. Laboratories on each level of the ship contain a piece of the formula for red dust manufacture. Somehow you will need to find the security codes for the levels where the labs are to have a chance with this sub-mission.

The five pieces of the formula are picked up by pressing the second key in the first column of icons. To get to them, however, you must switch off the security circuit on the lab's level in order to get through the security door — you cannot get into a lab using the beamer pads.

Invoke the security pass system using the icon pad and a series of six tumblers appear in the status window. Each of those tumblers must be rotated so that they each contain the same symbol. The icons which, until now, have been used to choose alien numbers can be used to rotate the tumblers in various patterns.

Only with great difficulty can the sequence be set but to get the formula you will have to master the technique. For a start you will have to make a chart of the tumblers each icon controls. I can assure you that, though it's pretty devious, it is possible — I've done it.

That's all there is to it! Avoid being killed, plant the explosives and piece together the secret formula. And the best of luck — Ocean has some fiendish minds lurking in its gameplay development department. Assuming you do manage to achieve your targets (I only managed two charges — at the lab and at the water inlet), hanging around is not recommended. With your explosives about to blow a rapid vacation of the scene is in order. Find the Transit Out bay — its location can be discovered from the icon control pad — and beat a hasty retreat. As you get nearer to escaping, the robots become frenetic in their activity trying to hunt you down.

SOFT 4 WARE

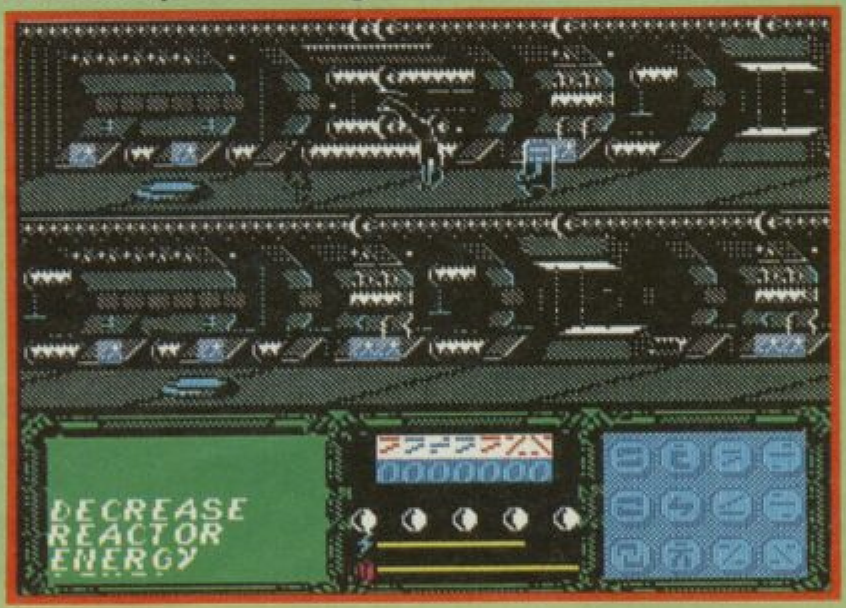
Initially, I was quite put off **V** by the lack of instructions. I had no idea what was going on to start off with, and apart from the stunning graphics I didn't realise just how clever the game is. The status displays seemed baffling and I had great trouble with the icon panel.

Then slowly I was hooked and drawn in. Frustration turned into a determination to suss it all out and I was converted. Easily one of the better movie spin-offs.

And by the way, a third TV series is apparently on the way, going into production later this year. *John Gilbert*

Publisher Ocean
Programmer Garry Knight
Price £7.95
Memory 48K/128K
Joystick Kempston, Sinclair
★★★★

Donovan leaps over a robot guard to avoid it



Taxcalc

Inaccurate tax coding is reckoned to result in about one in four of us paying the wrong amount of tax.

So a program that might help to reduce your tax bill looks like good news. The Consumers Association has released its up-dated tax calculater **Which? Taxcalc 1985-86** available for both the Spectrum and QL.

The program is based closely on the tax return forms that many people are currently completing. It's in three parts, each asking questions on earnings, income, outgoings and allowances before it calculates how much tax you should have paid and whether you owe the taxman money or not. For a married couple it also calculates the effect of being taxed jointly and seperately. For those aged over 65 the amount of age allowance claimable and how to off-set outgoings to minimise tax are automatically calculated.

The first thing that strikes you is that — even though most of it is self-explanatory — there is no manual to help you with the questions. The program offers a source of extra explanation in the form of references to pages in the *Which? Tax-Saving Guide* but, this, as far as I know, is only available to subscribers of *Which?* magazine which costs £31 — actually quite a lot of cash.

Before starting to run the program you will need to gather together everything you can about your finances, ie P60, Building Society pass books, mortgage statement and so on. Although a summary and results can be written to a file, there is no facility for storing the date and changing or adding to it. Since many users will find they don't have all the necessary information immediately to hand the save and load data facility is vital.

The string of questions, in a simple yes/no answer format is easy to use and the questions are split into sections dealing with the various types of income, allowances and outgoings shown on the tax return forms.

The chances of making a mistake are reduced by being able to accept or reject (and edit) the entries at the end of each section.

As well as writing to a file the summary can be printed as you work through the program. While the print-out is clearly arranged, with only those items which affect the tax bill being printed, it is not immediately obvious how some of the calculated figures are arrived at, particularly the 'total income' figure. Explanations would have helped.

```
                              T A X C A L C
                              =============
            The WHICH? Income Tax Calculator for the 1985/86 tax year
---------------------------------------------------------------------------
                                          SELF EARNED &     WIFE'S    TAX
INCOME                                    ALL INVESTMENT    EARNED    PAID
------
Earnings

        Husband's Job 1
Earnings                                       13560
Other Payments                                     0
Expense Allowances                                 0
Fringe Benefits                                    0
                                             -------
                                               13560
Pension Contributions               1400
Allowable expenses                     0
Earnings abroad deduction              0
                                 -------
                                           -    1400
                                             -------
Taxable pay:                                   12160             3796.00

Leaving payments                                   0

        Wife's Job 1
Earnings                                                  6325
Other Payments                                               0
Expense Allowances                                           0
Fringe Benefits                                              0
                                                       -------
                                                          6325
Pension Contributions                             0
Allowable expenses                                0
Earnings abroad deduction                         0
                                            -------
                                                     -       0
                                                       -------
Taxable pay:                                              6325   1972.00

Leaving payments                                             0
```

At £6.95 (£8.95 on the QL) for a program that is only useful for one year, and is likely to be used only once or twice, it seems expensive.

However, with a good probability that a check on your tax could save you money **Taxcalc** could turn out to be a better buy than it seems. It's certainly easier than trying to do the same calculations by hand.

From a presentation point of view the program is no great shakes — but then it doesn't need to be.

Mike Wright

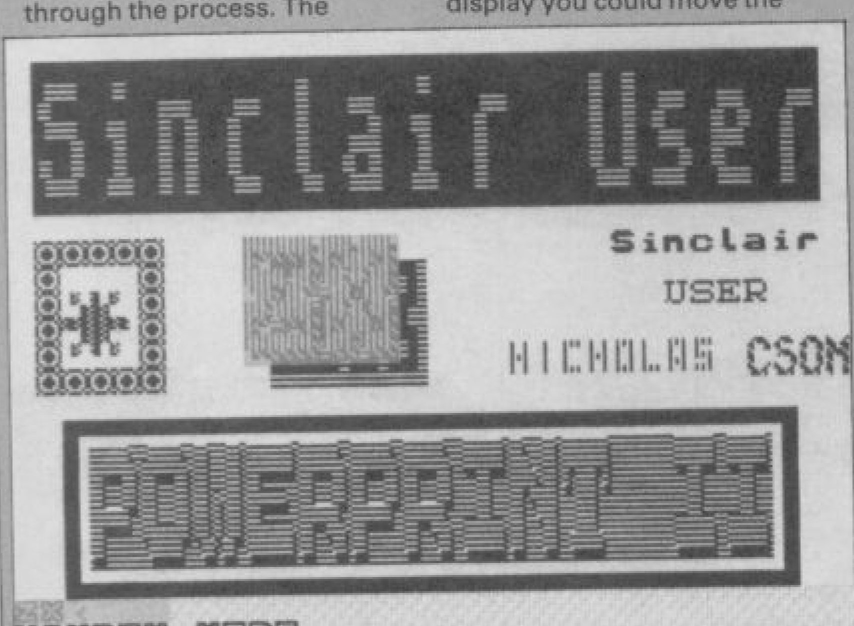
Publisher Consumers' Association
Price £6.95 (Spectrum), £8.95 (QL)
★★★★

Powerprint II

Tune up your printer and get ready to produce some professional quality screen dumps.

Powerprint II is a text print utility which not only has the capability to produce 315 different styles and sizes of type but it will print your character designs on to most types of dot-matrix printer. It can be used to create banners, letter heads and advertising displays.

A small 15-page booklet accompanies the software and includes a step-by-step guide through the process. The display is split in two. The bottom two lines form the command window and the character display, which commands the rest of the screen. The main display contains a variably sized and moveable window into which your text is put. If, for instance, you wanted to put a line of compressed, double-size, characters in the middle of the display you could move the window to that position and alter it so that its height was slightly higher than its width.



Once you have typed your message into the computer you set its style using a palette display of upper and lower case letters which range from A to U. The text can be inverted and a shadow can be set behind the characters when they are printed.

You can display several messages on the screen by moving the window around and you can print borders around them by filling the window with text, shrinking the window and using *Fill* again. The width of the window depends upon how much you shrink the second window.

Screen dumping depends upon the type of printer you have. If you still own a ZX Printer or Alphacom 32 you just press *H* and a hard copy appears. The job gets more difficult if you own a dot-matrix printer and a Kempston E interface. In that case you must use the printer driver routine and tell it whether your interface can cope with 22 or 24 lines, whether *Randomise Usr* is needed to invoke a copy and whther your printer interface needs to be initialised before every dump attempt. If you answer 'Yes' to the latter two options the program will drop into Basic and you must add your printer control commands.

Powerprint II is a versatile sign designer but of limited use. It could be helpful if you have fairs to promote, a small business to run or adverts to place but without the likes of a Laser printer the final output can never be of 'professional' quality. It is useful for designing posters but so is a large sheet of paper and a box of coloured pens.

John Gilbert

Publisher Buttercraft
14 Western Ave,
Riddlesden,
Keighley, Yorks.
Price £7.99 (tape),
£10.99 (microdrive)
Memory 48K
★★★★

Sport of Kings

Now you look like a gambling gent so can I interest you in **The Sport of Kings** — all for the princely sum of £2.99?

And we're not talking gee-gees but laundry . . . namely how to lose your shirt on a line of winners.



First thing to do is state the number of players, how many horses will run in the season and what factors will affect results — the more the merrier.

SOFT 2 WARE

Then, because you wouldn't want to waste your money on maidens, make a slow cup of tea while it auto-runs some races.

Consult the race card and peek at the form book to check who rode that dead cert to win over what trip.

Now to the bookies, honest as the day is long, chewing on a fat cigar. You've got a choice of win and each/way flutters, plus straight and reverse forecasts — you can even stake money you don't have which strikes me as unrealistic, unless the program later breaks your legs!

Everybody makes their selections and places their bets.

The race itself has nice graphics with touches like waving spectators and, then it's collect your winnings or take out a second mortgage.

I can't see this being one of Mastertronic's biggest sellers. To anybody who isn't a disciple of the Tote it's likely to appear slow and boring. *Jerry Muir*

Publisher MAD Games
Programmer Jeff Calder
Price £2.99 **Memory** 48K
Joystick Protek, Cursor, Kempston, Interface II
★★

Ballblazer

Welcome, fans, to the 3097 Ballblazer championships and . . . hang on, am I the Sport Correspondent or not?

After **Summer** and **Winter** Games is seems the latest craze is Future Games. Only last month I was playing psychotic squash in the shape of **Bounces**. Now it's **Ballblazer** and . . . well, wait and see.

Lucasfilm Games insisted on the highest standards when it came to this conversion of an Atari classic. Was their perfectionism misguided? **Ballblazer**'s closest contemporary is probably ice hockey, though it's played between two people, or droids, sitting in high velocity skimmers called Rotofoils.

The game has you blasting round a curved pitch which enforces an artificially close horizon, in search of the Plasmorb which hovers at head height and has to be blasted between two Goalbeams of pure energy.

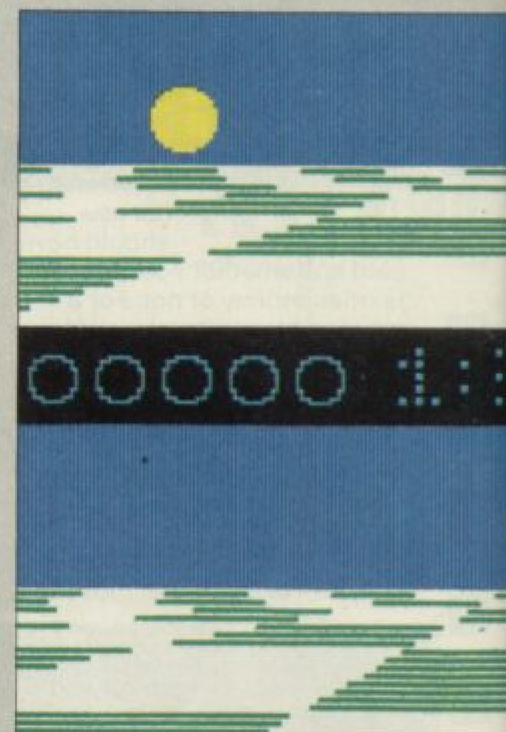
As you might expect there's a lot of hi-tech jargon surrounding the game — everything apart from the 3097 equivalent of 'sick as a parrot, Ron' — so the best thing is to sit back and watch a sample game. Problem is that just pressing 'N', as suggested in the instructions, doesn't work. But fear not — the answer's quite simple. Just use the selection system, which it must be admitted is a little clumsy at first, and set one droid against another then press 'S' to start. A word of warning though — make them both low Grade I droids if you want to follow the action. For mere spectator thrills though, set two Droid 9s against each other — they are *fast*.

Don't set yourself too high a challenge at first but go for a Droid 1, unless you're leaping straight in to play a human opponent, and swot up on a few tactics.

Seated in your pyramidal Rotofoil you have a split view — one for each opponent. It's the ideal way to cope with a two-player game and even against the computer could give you a chance to guess what the enemy has in mind — if you can snatch a second to look away from your own screen. Controls are simple, merely directions and fire, so with a not-too-taxing three minute bout chosen (nine, the maximum, would exhaust most mortal beginners) it's time for the kick off.

The rules of **Ballblazer,** possession and goal scoring, are easy — play isn't! You'll see the orb come shooting into the centre of your viewscreen but if you're not quick off the mark that may be your last time for a while. Race forward and at this level you'll probably take it. As the forcefield surrounding your foil captures it, the ball turns to your game colour. Don't dawdle for too long though — your opponent will already be gunning for you.

The foil snaps to face the direction of the goal-end, which is useful because the close horizon stops you seeing it immediately. Thrust in that direction. As you swerve the orb sways in front of you and this can be used to blast the ball off at an angle. At 60 metres, which is 16 squares on the checkerboard pitch, the goals suddenly come into view. Don't fire till you see the white of the posts but remember, the further back you are, the more you score. The price for success is one to three points but also a smaller goal next time.



Legend of the Amazon

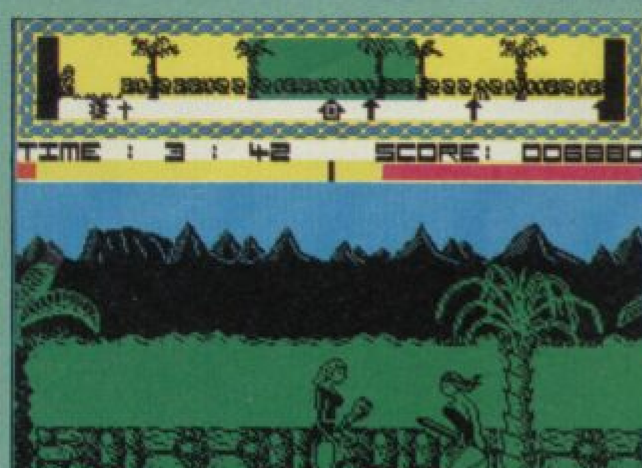
They came from across the waters of the Atlantic. They came wearing very little clothing, and they came about six months after the adverts first started appearing.

They came in obvious answer to a desperate cry from US Gold — 'Send us a martial arts program!'. Yes, The Amazon women have finally arrived.

What we have is an all-female **Fighting Warrior.** *The Wild Women of Wongo* meet **Exploding Fist.**

The plot is absurd: you play Lady Wilde, whose plane has crashed in the jungles of South America. Your baby daughter has been spirited away by the savage Amazon women, and you must fight a whole string of these superwomen in order to rescue the helpless little thing.

Control is simple. You can move left and right, jump up and duck, or jump forward. With the fire button held down, you can thump your foe on the head, in the belly or round the shins. At first you only have a club, but you can exchange that



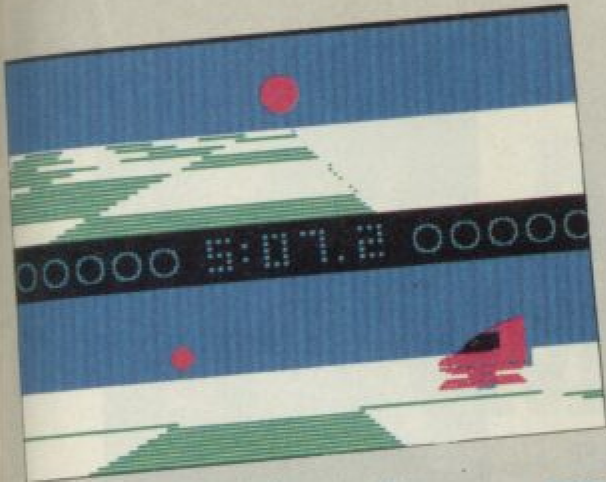
SOFT 4 WARE

for your enemy's weapons if she has better — on Level 4 the Amazons carry swords, and at Level 8 axes.

The play is split into ten zones, and each one must be completed within four minutes. That's not too hard a limit — if you can't do it in the time then it's probably because you're dead. I found the early Amazons rather thick and easy to despatch once a good rhythm of play was established. But after two or three have been killed they get a lot smarter, and you begin to understand why *Wonder Woman* always wins in the end.

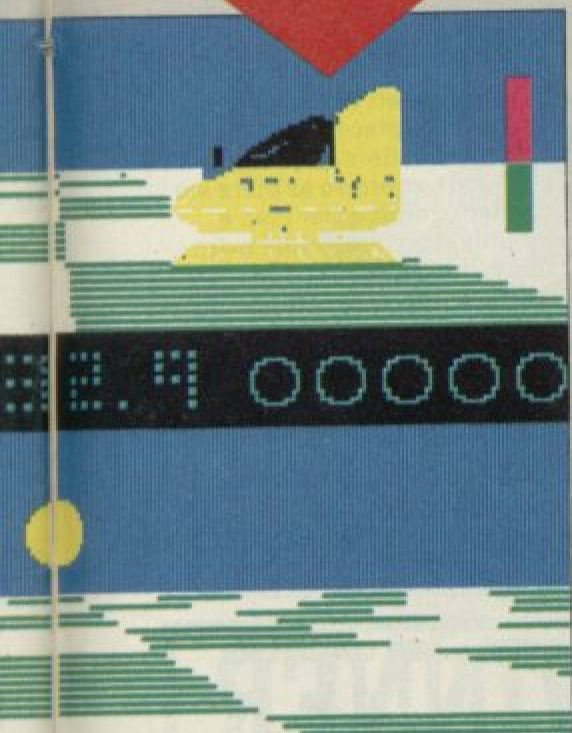
There are additional hazards. Every so often arrows fly across the screen, some high, some low, and there's a peculiar little plant called a Spiker which hurls a couple of oversized conkers at you. It's important to learn to avoid those quickly, as you cannot afford the wasteful drain in energy.

Graphics are in monochrome



Suddenly the orb will be snatched away from you and looking down you'll find that once again it's changed colour and is bobbing along in front of your opponent. Your best tackle is probably to swoop down trying to intercept from the side then giving a burst from your blaster to knock the ball free. If you're quick you should be able to recapture it, but for how long?

SINCLAIR USER CLASSIC



The other defence is blocking which includes acting as goalkeeper but it's an undertain last resort and it's best to keep the other player away from the beams.

The winner is, not surprisingly, the highest scorer at full time, though it's a walkover — or 'shut out' — if one player scores all ten points. The most excitement I had was in a well balanced match (no, I won't say which level of Droid, other than it wasn't 9!) where we drew.

In this situation the game contuines, the first to score again being the winner. We thrashed it out for a further five minutes at least — it seemed like five hours — until, after several near misses which I thought had cost me the game, I slammed it home. I almost did a lap of honour round the room, it was such a kick.

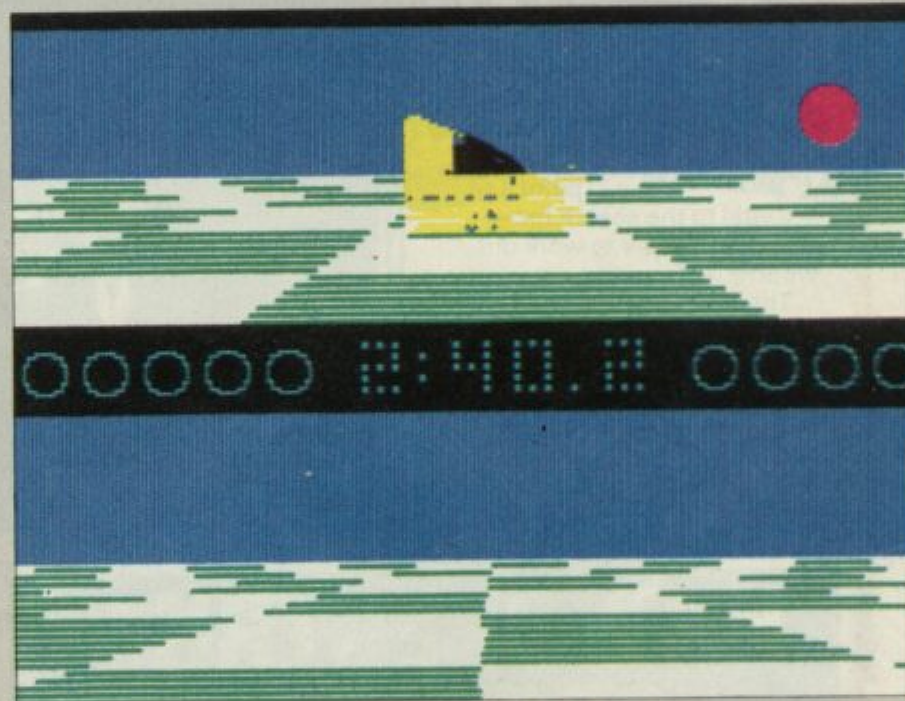
With other advanced techniques to learn such as dribbling and well judged skill levels this holds up very well as a game. There's a robotic sounding theme which could quickly become annoying but it can be switched off. Other than that the sound is mainly for information, such as the countdown beeps during the last seconds or the change in buzzing as you near an opponent ready to blast the orb away.

Graphically it's simple and, though there are odd attribute problems at times, the whole thing moves so fast through the two widescreen windows that it doesn't matter.

In fact it's all so fast that any visual shortcomings seem purely incidental. What really matters is that it is extremely addictive and immensely playable. Possibly the best, most convincing sport simulation on the market, even if there's nothing real to simulate.

Jerry Muir

Publisher Activision
Programmer Lucasfilm Games
Price £9.95 **Memory** 48K
Joystick Kempston, cursor Interface II
★★★★★



n Women

— green and black — and the jungle backgrounds are nicely cluttered with old ruins and hairy creepers. At times it is difficult to see the arrows and spikes against the background, which is probably deliberate and certainly realistic. There are clearer areas, and it's worth trying to move into the open when dodging. Animation is also competent, although with only a few movements compared to most combat games it jolly well should be.

I was well-prepared to hate this game, given that it's late and backed by one of the most appalling ad campaigns.

In fact it's great fun to play, and I wouldn't mind betting it'll do well. A little easy, though.

Chris Bourne

Publisher US Gold
Price £7.95
Memory 48K
Joystick Kempston, Sinclair, Cursor
★★★★

Who Dares Wins II

Bang, Bang, Pop, Pop. A lone soldier zigzags at a trot into the compound. Minute dots stream from the enemy's rifles, but he waltzes round them.

Now there's more movement as the opposing troops appear, flickering wildly from behind some primitive looking trees. The air is filled with gunfire and yet nothing can stop the lone commando. More soldiers charge straight through the walls of flanking buildings — as if they weren't there — to join the fray. Two collide and sink to the ground in an indistinguishable blur. With one last convulsive flicker they disappear, shot by our hero who has turned a tree blue by his mere presence.

Grenades are his back-up and he's got five of these. Just press on the fire button for a while and he'll throw one. A small problem here. To chuck it you must briefly press the fire button on your joystick; keep your finger there a fraction too long and you'll waste his five grenades.

Fortunately, he's not invincible and eventually gets blown up by a patch of red. This starts off as a bomb thrown by a missile launcher. It wavers through the air and lands in a splurge of colour. Fascinated our hero doesn't try to dodge and gets himself splattered.

Further hazards await this intrepid blue figure. He must cross into the jungle and rescue a prisoner of war about to be executed at pistol point. Having dodged an almost invisible patch of quicksand, killed the executioner and avoided more bombs dropped by aircraft, he has to storm the enemy garrison to complete that level.

Life now gets hectic as you try to manoeuvre your commando past a posse of scurrying soldiers. He has to shoot at least 12 and avoid a lorry before making it into the gateway.

Once through this section you must tackle rivers, boats and steadily increasing numbers of enemy soldiers, pass through eight territories before starting all over again at a higher difficulty level.

The attribute problems are appalling with violent colour clashes each time two objects meet. Sound — an annoying little jingle — is thankfully limited to the menu screen.

The graphics are small and basic and if Alligata thinks this will compete with **Commando, Rambo** and **Green Beret** it should think again.

Clare Edgeley



Publisher Alligata
Programmer Steve Evans
Price £7.95 **Memory** 48K, 128K
Joystick Kempston, Interface 2
★★

Cyberun



Surfing through the galaxy, propelled by your thrusters, you scour the surrounding space scene, not knowing what is going to happen next.

Yup, Ultimate's done it again. It's released **Cyberun** with no instructions, no hints on what to avoid — blue saucers and revolving horseshoes are particularly vicious — and no tips on what to look for. All you get is a long history of Zabarema, Cybertron and Cybernite — which isn't a lot of help.

SOFT 3 WARE

The first thing is to find the vertical and horizontal thrusters, without which movement is like swimming through a sea of syrup. These can be found near your start point and are vital to the search for — well, you'll have to work out what!

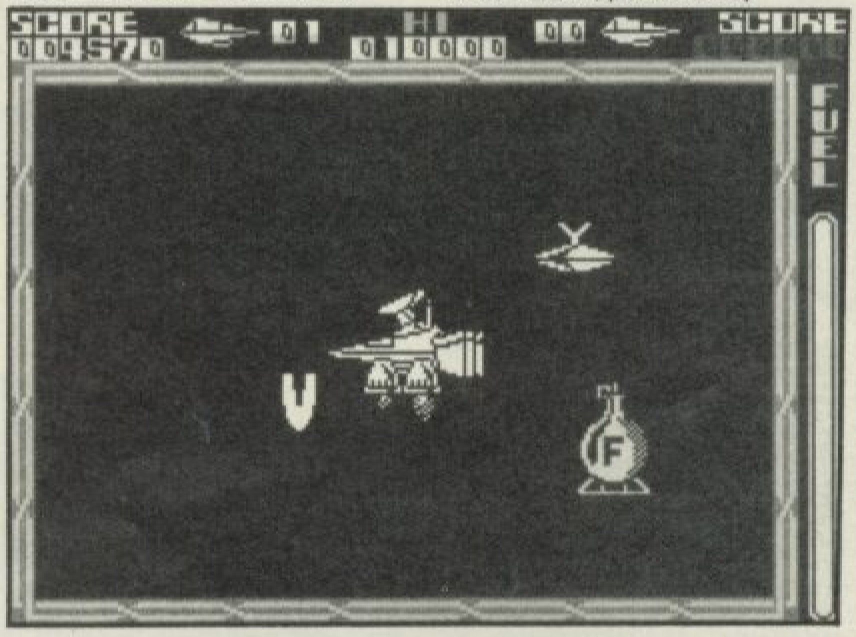
There are hoards of aliens floating around and those are joined by shooting stars and meteors. Avoid these as they wear down your shields and you'll explode. Not good. Blue ones should be avoided at all costs, one collision and you're a gonner.

The landscape is mountainous with almost vertical slopes. Difficult to fly up and avoid the aliens at the same time. On top you may find a volcano. Hang around and something may happen. In the valleys are the entrances to a maze of caves and tunnels. Here the Cybernite Crystals gleam though they are not easy to collect and the plasma ray may come in handy.

Lurking in space, among the usual interstellar debris, are platforms bearing photon torpedoes and a plasma ray gun. The torpedoes look just like bullets and behave in a very strange manner — make sure you don't bump into any as they whiz around.

The clouds drifting aimlessly by are also vital to your mission. They tend to clog up your spacecraft, but they also need to be harnessed at one point in the game.

The graphics are pretty sparse and there isn't an awful lot of colour, presumably because there are depths to the game which you'll only see if you work out the puzzles.



I spent ages flounding around — there's an awful lot to do but you don't know how — and I found **Cyberun**, initially, very frustrating. Only after a while did things start to make sense and fall into place.

Cyberun offers quite a challenge, more so as there are no instructions other than a lengthy storyline. Some extra hints to start would have helped. *Clare Edgeley*

Publisher Ultimate
Price £9.95 **Memory** 48K/128K
Joystick Kempston, Sinclair, cursor
★★★

It's thumbs up for the Spectrum Plus

Running through the pros and cons of the Sinclair machines. Andrew Hewson's view

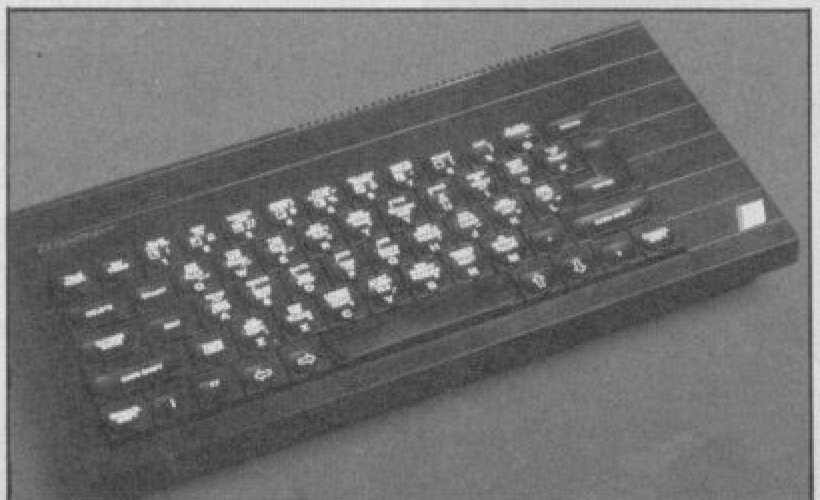
Which computer shall I buy? asks Bryan Burridge of Chippenham. He's decided to go for a Sinclair machine which cuts the choice down more than somewhat, and he wants it both for games and for business applications like accounts.

There are four machines to choose from — the ZX81, the Spectrum/Spectrum Plus, the recently launched Spectrum 128 and the Sinclair QL.

I would dismiss the ZX81 without a second thought. Its time has long since passed although it is still interesting to use the machine.

And I would think long and hard now about buying a QL. Though it's based on the 68008 chip, and certainly more advanced than the Z80 which lies at the heart of the other Sinclair machines, I suspect that Bryan Burridge is not much interested in the difference between microprocessors.

Following Amstrad's dramatic take over of Sinclair in April the machine's long term future looks a lot less bright, but it may begin to be offered at knock-down prices. Its built-in Microdrives make it attractive to those who wish to feed lots of information into their machines



Spectrum Plus makes the grade

PRIZES PRIZES

Free game: From now on, each month, I shall send a program published by my company free to whichever *Helpline* correspondent catches my eye. Just to make it more fun I shall be unpredictable in my selection so step forward with your terse, funny, boring, unanswerable, unprintable, aggressive and thought-provoking letters.

Saved by the tape

A complaint from Nick Roberts of Ludlow. He has been using the program that I published in the March *Helpline* for defining a new character set but, as he points out, I didn't finish off the job. He grumbles: **You did not tell us how to save the characters on tape.**

Sorry Nick, you are quite right. My defence is two-fold. Firstly, with every explanation I have to stop somewhere which means that there are always some readers who are left wanting to know more. Secondly, saving the characters on tape is no different from saving anything else so I felt it was reasonable to stop without further detail on that point.

To put matters right the new character set occupies 768 bytes starting at address 64600 and so to save it on tape enter: SAVE "Filename" CODE 64600, 768

The word 'filename' can of course be replaced by any string up to ten characters long.

To load a character set from tape enter the following:

```
CLEAR 64599
LOAD "Filename" CODE
POKE 23606 , 88
POKE 23607 , 251
```

These four lines are similar to the program in Table 1 of the March column. The first line moves ramtop down to make room for the incoming information, the second line loads the data and the third and fourth lines reset the *Char$* system variable to point to the replacement character set.

One word of warning. It's best to put the lines into a program and run the program rather than enter each line as a command from the keyboard. If you enter the lines as commands, the third line causes the character set to change radically and you'll find it difficult to enter the fourth line because the screen will not reflect the keys that you press. If you want some fun, try it and see.

Back from the grave

Gosh! I thought as I read the letter. A ZX81 owner. I haven't heard from one of them for a long time. Thank you Arthur Cimatti of Elland, I thought I was the only person left in Britain who ever used the machine.

Arthur writes **I recently bought a ZX81 with a 16K Ram pack** (where from? I didn't think they were still available — Ed) **I want to be able to type in and save both 1K and 16K programs but I understand that certain commands in 1K programs are not translated in the same way by 16K memory. I've been told that Peeks and Pokes are the main culprits. Am I right?**

Indeed you are, Arthur, but surely you are making a mountain out of a molehill. If you come across a 1K program in a book or magazine you can whip off your Ram pack (with the power supply disconnected), bang the program in, save it on tape for the future and Bob's your uncle. If you then want to use a 16K program just plug in the Ram pack. Seems easy to me. Or am I missing something?

As a matter of interest it is not so much that programs are translated differently when a Ram pack is added. It is more that the memory is used slightly differently.

Imagine that you were setting out a small dining room table for a meal for four people. You would set a place at each of the four sides of the table wouldn't you? This is a bit like using the ZX81. Now imagine that you were setting a much larger, long thin dining table for four people. You wouldn't put a person on each of the four sides because they would be sitting a long way from everyone else. You would probably group all four around one end of the table, two people on one side, one person opposite and one at the end. This is like using the ZX81 with a 16K Ram pack.

Now, imagine that you were instructing your butler to serve a meal to the four people. If you said something like, "put a plate of food in front of each of the four people," the instruction would work for both a small.

Jumping to a new address

Someone else has been reading the March issue. Michael Fulwell of Reading asks: **Concerning your article on the Spectrum clock, is there a way of programming the Z80 to jump to an address other than 56 which is in the ROM?** Yes, is the short answer. It is a matter of using the maskable interrupt system.

The Z80 can be set to respond to a maskable interrupt in any one of three modes. In Mode 0 the processor simply waits until it is directed by an external device to execute a routine somewhere in memory. In the Spectrum there is no provision for the use of this mode. Instead, the Spectrum is designed to operate in Mode 1 all the time.

In this mode the Z80 saves the contents of the program

and store it away. Cassettes are very slow and disc drives are expensive, so Microdrives look





counter (so that it can later resume the task it was doing) and jumps to location 38h (56 decimal), as I described in the March issue. The Spectrum hardware forces this jump to be made by generating an interrupt 50 times per second.

The ROM routine at this address updates the clock by incrementing the *Frames* system variable held at 23672 to 23674 and then scans the keyboard to see if a key is being pressed. If so the appropriate code is stored in the systems variables and various flags are altered. On completion of the keyboard routine all the registers are restored to their previous values and the processor resumes its previous task.

The final interrupt mode, Mode 2, is the most powerful. If the Z80 is interrupted while in this mode it saves the program counter as before and jumps to an address partly determined by software and partly by the hardware which caused the interrupt. To be more specific, the Z80 takes the value in the 1 register and the value generated by the external hardware and calculates an address from them as follows:

Address = 256 * 1 register + hardware

It then looks at the contents of the calculated address and the subsequent one and calculates a new address from them as follows:

New address = Address + 256 * (Address + 1)

It then jumps to the new address. Thus if the 1 register contained 143 and the hardware generated the value 27, the Z80 would look at the contents of: 256 * 143 + 27 = 36635 and 36636. If these two locations contained 137 and 93, respectively, (ie PEEK 36635 = 137 and PEEK 36636 = 93) it would then jump to location 137 + 256 * 93 = 23945.

This rather complicated procedure is known, aptly, as an indirect jump and is not nearly as cumbersome as it at first seems. It enables as many as 128 different types of devices to be attached to the Z80, each type generating its own value to contribute to the indirect jump address. The programmer then constructs a table containing 128 addresses each held in two bytes and each pointing to the routine that handles a particular device. The 1 register points to the location of the beginning of the entire 256 byte table.

An interrupt can be generated by any piece of hardware which is attached to the correct line into the heart of the Z80 — rather in the manner that anyone can come and press the doorbell to call you to your front door. On the Spectrum the hardware generates an interrupt 50 times a second and then the Rom software looks to see if a key has been pressed and looks after the display refresh.

like a cheap and reasonably efficient alternative. However, while they are fine when they work, they are the very devil when they don't, and I know a number of Sinclair users who have engaged in three or four rounds of postal ping-pong with Sinclair before they have obtained satisfactory equipment — so beware.

table and a large one. However, if you said, "put a plate of food on each of the four sides of the table," then guests sitting at a large table would be surprised, not to say peeved, because their meals would not be put in front of them.

So, the secret to writing a program that works on both a 1K and a 16K machine is to make your program instructions as general as possible. Peeks and Pokes are tricky because they are the equivalent of telling your butler to put something down at, or take something away from, a particular point on your dining table without regard to where your guests are sitting. Beware!



If neither the 68008 chip nor the Microdrives are of interest then my instinct would be to avoid the machine. Retail support for the QL is patchy and, unless there is a good specialist computer shop in the vicinity, the QL purchaser is condemned to buying all the bits and pieces which are needed from time to time by mail order with all the difficulties that this can involve.

That leaves a choice between the Spectrum Plus and the Spectrum 128. Is the extra cost of the 128 worthwhile? If I felt sure that software was streaming on to the market which exploited the extra memory (the main additional feature of the new machine) or, if there was some hope of a reasonably satsifactory system for upgrading the Plus to perform like a 128, I would be inclined to recommend that new purchasers should go for the newer design.

I suspect, however, that the lack of really exciting new features will mean that the 128 will not replace the Plus unless Amstrad, the new owners of the name, force the pace by cutting the price. Therefore my current guess is that the 128 is destined to be an interesting but irrelevant step in the development of the Sinclair badge on computers, and that as a result the buying public should stick to the Plus for the moment. It may be long in the tooth but it is a hugely successful computer (in the UK) with greater support than any other micro.

Refusing to load

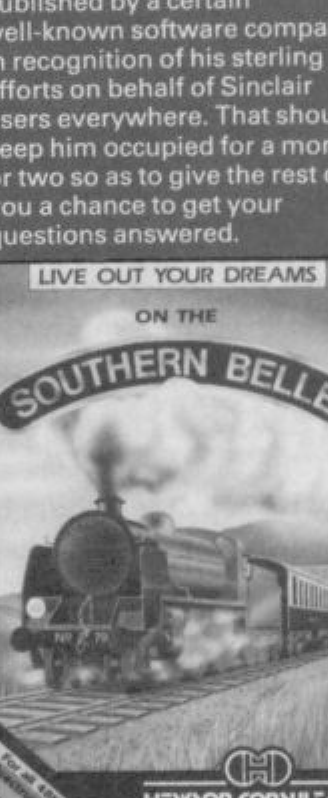
One of my regular correspondents, Chris Fowler of Sheffield, has written again. He asks: **Why? Why? Why when I have been as careful as I know how do I still get occasions when a program saved and verified on tape refuses to load?**

Oh Chris, I know the feeling of frustration only too well! You spend ages fiddling with the tone and volume controls to get the very best position. You use the best quality cassettes. You keep the tape leads well away from the TV to avoid stray pick-up. You only plug in one of the two leads to either Save or Load. You check everything twice. You *Verify* after saving. And still the thing won't reload.

The only certain answer that I know of is to save everything twice on separate tapes. If it is any consolation saving everything twice, or backing-up as it is known in the jargon of the trade, is standard practice at each and every professional computer installation. The reason is that it is all too easy to corrupt a magnetic record, whether it be on cassette, floppy disc or whatever. Corruption can be caused by a mains surge, a piece of dirt, a magnetised piece of metal, by physical damage, human error, thunder, lightning, fire, flood or tempest. Take my advice. When in doubt save it.

Prizes for best letters

Incidentally, Chris Fowler has written more letters to *Helpline* than anyone else and so, with the editor's permission, I am sending him a free copy of the steam engine simulator **Southern Belle**, published by a certain well-known software company in recognition of his sterling efforts on behalf of Sinclair users everywhere. That should keep him occupied for a month or two so as to give the rest of you a chance to get your questions answered.





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As a Spectrum user you already enjoy some pretty sophisticated equipment.

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Let's face it, there's not much joy in a joystick, and keyboards can be all fingers and thumbs. Frustrating, especially if your imagination is much faster than your fingers!

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The AMX Mouse brings to Spectrum users the same freedom and versatility which has, up to now, been the exclusive province of much more expensive computers.

So, it's no surprise that nearly all the new 16 bit 'State of the Art' computers now come with a Mouse as standard. Proof, if proof were needed, that the Mouse is here to stay.

There are three superb programs included with the Mouse. AMX ART – Making full use of on-screen windows, icons, pull-down menus and pointers, you'll be astonished at the quality of the work you can produce, save and print using either ZX or Epson compatible printers. AMX COLOUR PALETTE – The wonderful pictures you create with AMX ART can be brought vividly to life with rich vibrant colours. AMX CONTROL – Now you can create a 'Mouse environment' in your own programs, AMX Control adds 28 commands to normal Sinclair Basic.

There is also a growing list of programs available from other leading software houses, which also utilize the Mouse, including, Artist II and the Writer from Softechnics, and Art Studio from British Telecom's Rainbird software collection, and many more titles will be available soon.

Isn't it about time you trapped an AMX Mouse?

The AMX Mouse package costs only £69.95 and includes the Mouse, interface which also includes a centronics printer port and a fully illustrated operating manual.

This superb package is available from all good computer dealers or direct, using the FREEPOST order form below.

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Jump into the code

Since I last looked at the Multiface One from Romantic Robot they have up-rated it — at no extra cost — and it is now probably the best back-up device around.

The reason is that now it can do far more than just back-up programs, something it is remarkably good at anyway.

Externally it looks much like the old Multiface — with a Kempston compatable joystick interface on the left-hand side, a button on the top which when pressed backs up the entire contents of memory to a variety of storage medium, and a through port for other add-ons. The video socket has been replaced by a switch which can be used to make the Multiface transparent to programs.

Pressing the button brings up a menu at the bottom of the screen with five main options. Return takes you back to the program as though nothing had happened — an exit option tries to put you back in Basic if possible. Save does the obvious and saves the memory to microdrive, waferdrive, or either Beta or Kempston disc system — state which when ordering. Optionally you can just save the screen.

Copy copies the screen to a ZX Printer, or a full size one if you have a Kempston 'E' or Lprint III attached, and *Tool* enters the tool-kit part of the program. This allows you to alter any part of the Spectrum's memory, either an address at a time, via a window which displays 128 bytes or access the Z80's registers — all with the display in hex or decimal.

The last option, *Jump*, is potentially the most useful. The Multiface contains 8K of Ram which normally is used to hold various bits of the backed-up program. You can put your own program in this Ram and then use this option to jump into it. It might be a dissassembler, Basic tool-kit or whatever you want.

Multiface is a bargain at £39.95.

Romantic Robot, 77 Dyne Road, London NW6 7DR. Tel: 01-625 9463.

Too good to be true?

Teletext services like Ceefax and Oracle are now well established. The BBC and ITV companies broadcast hundreds of pages of news and other information along with the normal TV picture which can be viewed — provided you have a special 'teletext' set you can see them.

Now, even if all you have is a Spectrum, the AGF Teletext adapter makes it possible to receive these Teletext pages, and you can also down-load free software into the bargain.

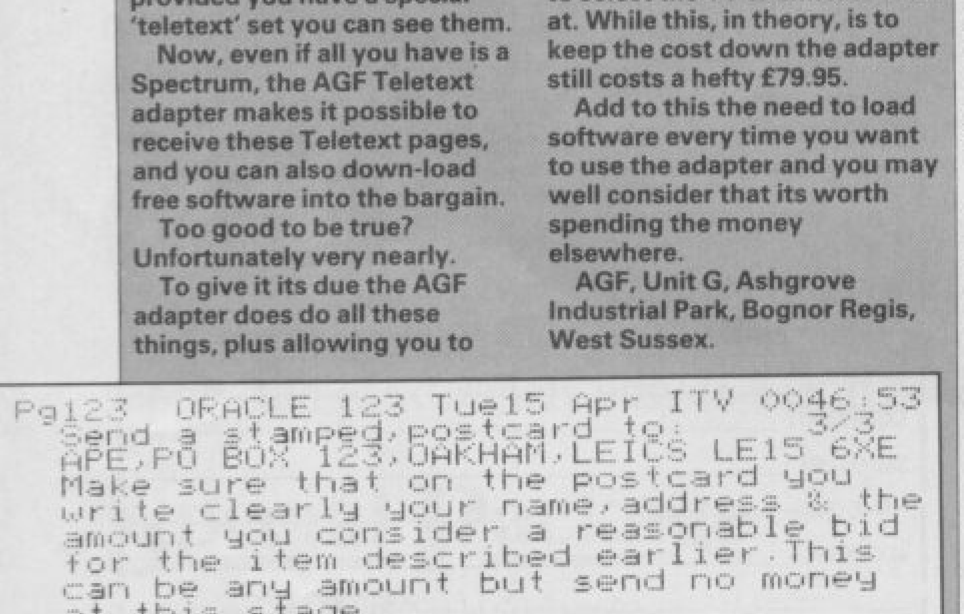
Too good to be true? Unfortunately very nearly.

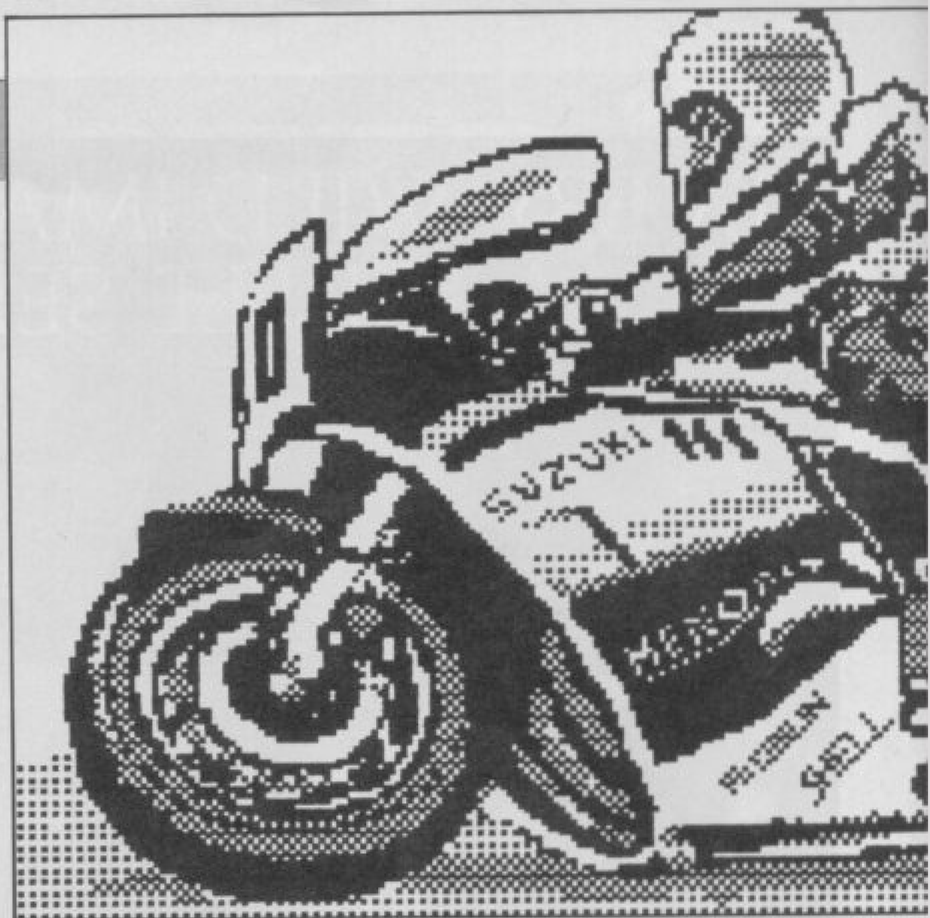
To give it its due the AGF adapter does do all these things, plus allowing you to save pages to tape or microdrive and print them on a ZX — or similar — printer. The draw-back is that you need a video recorder as well.

The reason for this is that the adapter doesn't have a tuner inside and it needs the recorder to select the TV channel to look at. While this, in theory, is to keep the cost down the adapter still costs a hefty £79.95.

Add to this the need to load software every time you want to use the adapter and you may well consider that its worth spending the money elsewhere.

AGF, Unit G, Ashgrove Industrial Park, Bognor Regis, West Sussex.





Scribbling on the screen

In the past it has been difficult to recommend a light pen for the Spectrum.

The ones that I've seen ranged from average to mediocre.

All that's changed now with the release of the Spectrum Doodler from F E Electronics. At last there is a pen that works and, within its limitations, works well.

The acid test of any light pen is if, in free-hand mode, you can easily write your signature on the screen. With the Doodler you can, in a variety of brush styles and at a reasonable speed.

The hardware for the Doodler consists of the inevitable black box which plugs into the back of the Spectrum, the pen and, on the 128 version, a lead which plugs into the monitor socket. The pen has a switch built into the tip, and to register its position you simply press it lightly on to the screen. Where the pen scores is in its accuracy, in other words the quality of the software supplied with it.

In use the bottom four lines of the screen are always taken up with a menu bar from which all the main functions of the pen are chosen. Icons are used to show the choices available and the current mode and fill pattern are also displayed.

When one of the icons is selected a pull-down menu appears with more icons to show the choices. All the usual functions are available, drawing lines in various widths, squares, cricles, triangles, text, magnify etc. The best feature is the brush option where you can choose one of 24 predefined patterns or even define your own. These can then be used both with the brush and as a fill pattern.

Overall these options are clear and well thought out, they make using the Doodler very simple so that even someone like me — with Van Gogh's ear for art — could use it.

There are one or two omissions that, in the light of the otherwise excellent software, are a bit of a let down. The main ones are that you can only draw on the top twenty lines of the screen; some method of scrolling it would have been useful. I found it impossible to change the background colour of the screen — I'm sure you can but couldn't find out how. With the well known attribute problems of the Spectrum some way of overlaying a grid showing the boundries would have been useful. Rubber banding, standard on all the latest drawing programs, was noticable by its absence. And lastly there are no facilities for printing your masterpiece, even an option to use the Basic *Copy* would have been useful. You have to save the picture, reset the computer and then reload the picture back in.

Despite these limitations the Doodler is by far the best light



pen to date. The hardware is fast and accurate which, if you are using it in your own program is all you need, and the software is very good, although it could do with a final polish.

At £29.90 its the most expensive Spectrum light pen, but worth the extra.

F E Electronics, Chesterton Mill, French's Road, Cambridge. CB4 3NP. Tel: 0223-353355.

All things for all QLs

Imagine, if you will, your perfect add-on interface for the QL.

Let your mind wander and think of all the things you might want to be in it. A floppy disc interface certainly, 512K of memory perhaps, maybe a parellel printer port. How about a few tool-kit commands, Ram disc, random access files, wild card copy, even a multi-tasking clock.

Impossible? No, the new Super Q Board from Sandy, has it all.

There is nothing revolutionary about the Super Q Board, all the elements in it have been available for some time in other forms but it is the first time that they have come together in such a compact unit — it only adds 5cm to the QL's overall length. Only the Technology Research Delta comes close, but that can only take 128K of memory.

What is remarkable is how Sandy has managed to pack everything in. On the end of the interface are connectors for the disc drive and printer side by side. The disc port will take any drive with a standard 'Shugart' connector, ie 99 per cent of available drives, while the printer port accepts a standard 'BBC' cable to any Centronics printer.

The interface also has the latest — Version 1.16 — release of the Tony Tebby disc tool-kit. See Fig 1. This includes all the commands shown in the adjacent box to make this interface the most versatile yet.

For example, while microdrives are quite fast, a Ram disc is unbelievably fast. To run one of the Psion programs in the Ram disc the Ram disc is formated and then the command *WCopy* mdv1_,ram1_ copies all the files to it. Then you would use *Ram_Use* 'mdv' so that the program thinks that it is accessing the microdrive; instead it actually uses the Ram disc. The result: a hundred-fold decrease in drive access time. At the end of the session just reverse the process.

The other major command, of particular interest to Psion suite users, is the *Par_Use* command. Although the *Instal_Bas* program which sets up the printer says that you can use a port other than Ser, in practice it is reluctant to recognise it. By entering the command *Par_Use* 'ser' all output directed to the serial port is redirected to the parallel port, you don't even have to alter your printer set-up.

There is another bonus in using the parallel port rather than the serial one: you can set up a printer buffer for it. The QL can send information to a printer faster than the printer can print it, therefore, with long files it is sitting around waiting for the printer. A buffer takes the information and sends it to the printer as it needs it while the QL gets on with whatever you're doing.

Unfortunately you cannot use this facility directly with the Psion suite because of the way these programs work but you can, for example in *Quill*, using a Ram disc and a little ingenuity, print a twenty-page document and be back using the program ten seconds later. The printer will take just as long to print as usual but at least you don't have to wait for it to finish.

It would take too much space to cover all the facilities of the interface — the manual is over thirty pages — but suffice it to say they form a welcome addition to SuperBasic. As well as the commands I have mentioned there are others to directly read sectors on the disc, control multi-tasking jobs, simplify reading and writing to a disc and let you read a 40-track disc on an 80-track drive.

If you don't already have a disc interface and memory expansion for your QL this is the one to get.

The Sandy Super Q Board is available in the UK from: Farmintel Ltd, 35 Stratton Way, Biggleswade, Bedfordshire SG18 0NS and the 512K version costs £249.00.

Fig 1. Additional tool-kit commands

Flp_Use
Flp_Sec
Flp_Track
Flp_Start
Par_Use
Ram_Use
Spl
Jobs
AJob
RJob
SpJob
Get
BGet
Put
BPut
ReName
Truncate
Stat
WStat
WDir
WDel
WDel_F
WCopy
View
Clock
Spl_Use
Data_Use
Extras
FPos
FLen
FTyp
FDat
FOpen
FOp_In
FOp_New
FOp_Over
FOp_Dir

Sunset video gets image conscious

Just when I thought I'd seen every possible use for the Spectrum, Sunset came along and turned it into a camera.

The Sunset Video Digitiser takes still images from a video camera or video recorder and displays them on screen — and costs £128.50.

Once the picture is in the Spectrum you can manipulate it by altering the grey scale — each pixel is stored at one of sixteen levels — and print it to a printer. This last feature was omitted from the review model but all you have to do is *Copy* the screen.

As the Spectrum cannot display the whole of a normal video picture you can select a part of the incoming image, roughly two thirds, as the picture.

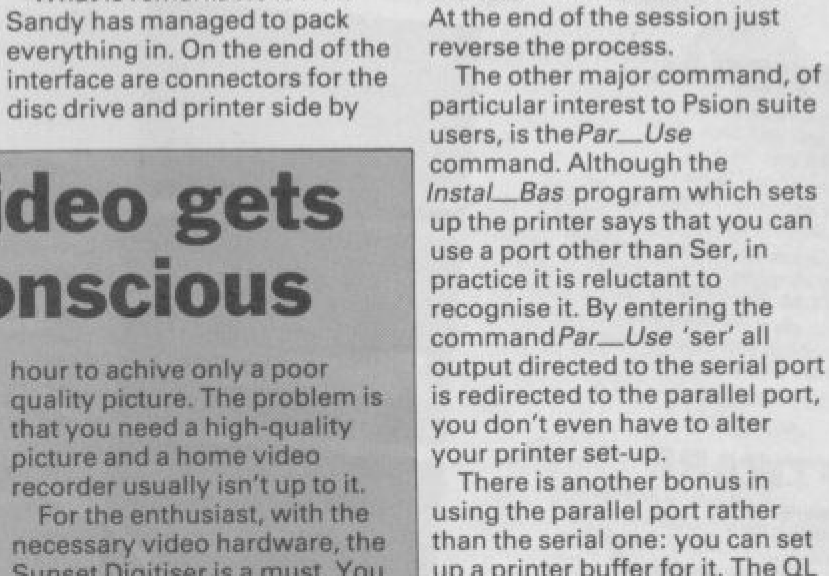
Generally speaking, the whole process is fairly automatic. You control the overall grey scale but basically you must input a still frame, press a key, and in theory the picture appears.

In practice it proved a little more difficult than that. The first attempt worked find first time, while the second took half an hour to achive only a poor quality picture. The problem is that you need a high-quality picture and a home video recorder usually isn't up to it.

For the enthusiast, with the necessary video hardware, the Sunset Digitiser is a must. You could create all sorts of images, load them into a graphics program and end up with some stunning pictures.

For the home user, think carefully before you buy.

Sunset, 3 New Road, Tongham, Farnham, Surrey. Tel: 01-681 8702.

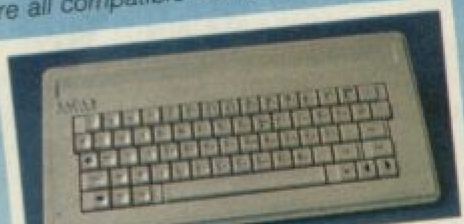


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Q.L. version shortly available.

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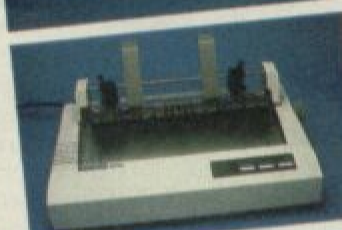
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"... The GLP ... has a lot to recommend it ..." – Sinclair User

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THE CITIZEN 120D

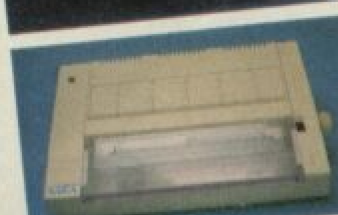
A precision dot matrix printer with a 2 year warranty, the Citizen 120D operates at 120 c.p.s. in fast draft, or 25 c.p.s. in N.L.Q. It has Epson compatible graphics, tractor and friction feed as standard, an optional cut sheet feeder and is very compact. Further features include proportional spacing with many type styles and an exceptional 4K printer buffer
"... The 120D is an excellent printer ..." – Sinclair User

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THE NEW SAGA DX85

Big and robust the DX85 is a heavy duty dot matrix printer which is made in the U.K. It prints at 120 c.p.s. It has a bi-directional logic seeking print head and centronics interface (RS 232 available). It has a draft quality mode and costs only **£199.95** (Inc. VAT).



THE LTR1 PRINTER

The LTR1 is a 12 c.p.s. letter quality printer with RS232 and centronics ports built in. The LTR1 prints in ink onto standard paper and requires an interface to work. The LTR1 is only **£139.95** (inc. VAT).

Send off NOW for full catalogu

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SURGERY

Sinclair Surgery

Spectrum on the blink? John Lambert has a cure

Colour clash on the 128

I HAVE recently bought a 128K Spectrum and wonder if the new Spectrum still has colour clash and attribute problems. I have bought new games for it and they still have colour clash. With such a big jump in extra memory and improved sound, why does it still have colour problems?

I would also like to know if the new Kempston mouse, which



was launched for the Spectrum range including the 128K, will work with existing software other than art programs and packages.
Nicholas Fox,
Hanham,
Bristol

●*The Spectrum 128 still has the same attribute problems as the old Spectrum because the display is the same. The irritating 'dot-crawl' has, however, been cured.*

The Kempston mouse is compatible with the 128 but it cannot be used to drive programs which are not specifically configured to use it.

Scandalous paper costs

I RECENTLY had to buy some paper for my Alphacom 32 printer, and was appalled to learn that many former stockists had simply stopped selling the printer and paper, leaving their customers high and dry with a printer thay can no longer use.

I was even more disappointed to find that black paper was selling at £2.50 a roll from or south London stockist. I normally use blue — currently £1.20 a roll — as it's cheaper and gives a cleaner, longer-lasting printout. In 1984, blue and black paper each cost £1 per roll and, in fact, this was one of the main selling points of the printer? What can justify this exorbitant increase?
Robert J Baker,
London SW4

●*Paper for the Alphacom is in short supply because the old importers, Dean Electronics, has stopped handling it. The company has a small amount left and can be contacted on 0344-885661. The reason for the price increase is that the paper comes from the States, and over the last year the value of the pound against the dollar has dropped considerably.*

A question of interface

I OWN a 48K Spectrum which I use with a VTX 5000 modem. I plan to purchase one of the upgraded Centronic GLP printers to print in Basic and Prestel/Micronet modes, and to operate as a word processor with **Tasword 2**.

Is this possible? I would like to operate the printer through a Centronics interface, I believe that is also equipped for the RS232 interface.

Which interface will meet my needs? Will a Kempston E be sufficient or will Tasman's C printer interface be better?
R I Morbey

●*The GLP is an excellent printer and an ideal addition to the Spectrum for your needs. The only problem you may have is in copying the screen if you are using the VTX5000.*

The Kempston E interrupts the Spectrum's Basic Copy *command and diverts it to a full-sized printer, however the VTX calls this routine from machine code and does not initialise the interface. One way round is to alter the VTX's Basic control program to include the* Copy *command, but that means you only get the top 22 lines.*

For more detailed information try the Micronet Book *from Melbourne House, priced £6.95 or try Micronet itself.*

Which keyboard?

I WOULD like your advice in choosing a better keyboard for my 48K Spectrum. I read about the Lo-Profile keyboard in the February issue. Is this keyboard alright or is there a better one available? I do not want to spend more than £50.
G S Potter,
BFPO 50

●*Which keyboard you buy depends on what you are going to use it for. If you are only going to do a small amount of programming then the Plus keyboard, at £20 is as good as the Lo-Profile and a little cheaper. If you intend to do word processing then it is worth spending as much as you can afford and going for the Saga 1 at £39.95 or, even better, the Saga 2+ at £54.95.*

The Saga continues

IN THE February issue you gave a glowing review of the Saga 2+ keyboard for the Spectrum. Will you be doing a review of the company's new 2001 keyboard which is advertised in the April issue? Considering its exorbitant price, most of us Spectrum users are curious about it.
Wong San,
Gorleston,
Norfolk

●*I shall be reviewing the Saga 2001 soon, I try to review products that are in production rather than one-off prototypes.*

Damaging light pens?

I AM thinking of buying a light pen for my 48K Spectrum, however I have been told it can damage my TV. Is this true? If not, can you advise me on a good light pen in the £20 price bracket?
A Minns,
Cricklade,
Wiltshire

●*A light pen cannot damage the TV. The front part of the screen is glass and so is unlikely to be scratched by a plastic pen.*

There are two pens in this price bracket — the DKTronics and Trojan CAD Master. Try to look at both before buying, if you can't, I suggest you try the CAD Master.

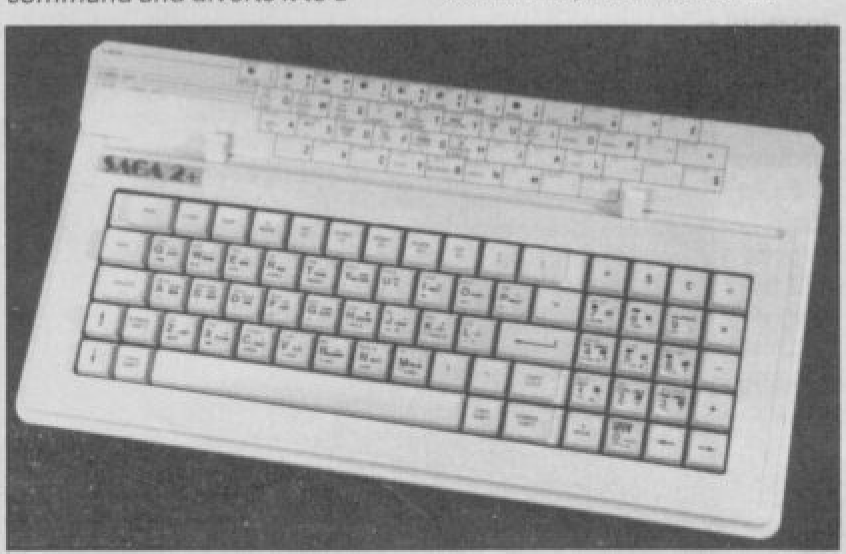
Rom cartridge causes havoc

IS IT SAFE to play Rom cartridges on the Ram Turbo through the Interface 1 port? I am asking because my Currah Speech box was damaged when connected to the rear while playing Rom cartridges.

On returning the Speech box to the shop where I bought it, I was told that Roms with the Currah were not compatible. While the shop assistant agreed that there was no warning on the instructions he added that it was uneconomical to repair my Speech box. Is it safe to play Roms with other peripherals, and could similar problems occur while using a Microdrive with other peripherals fitted?
R S Reynolds,
Newhaven,
Edinburgh

●*There are a few peripherals which are not compatible with Interface 1 and 2 but all the ones I have seen have pointed this fact out in their manuals. It is unlikely that they could be damaged by using them with the Sinclair products.*

The problem you had with the Ram Turbo, I'm afraid, was partly your own fault. If you look at the back of it, just above the connector, it says 'Sinclair Printer' and this is the only product which should be plugged into it.



Support for QL will continue

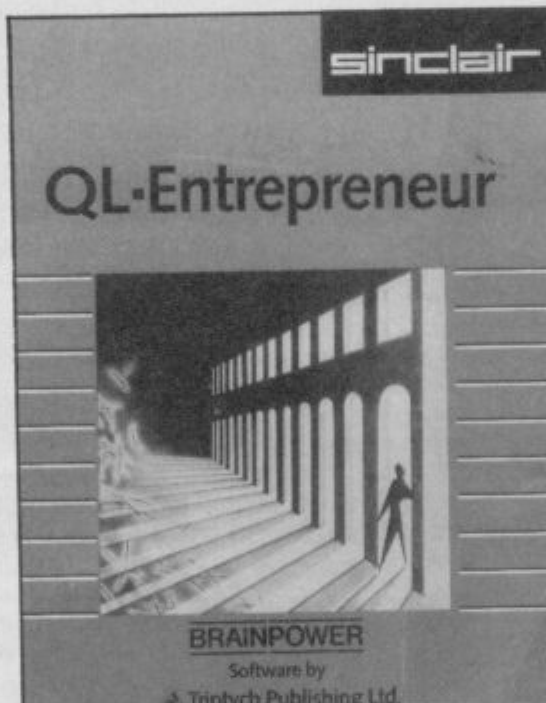
John Gilbert discovers that the fight to save the QL is by no means over

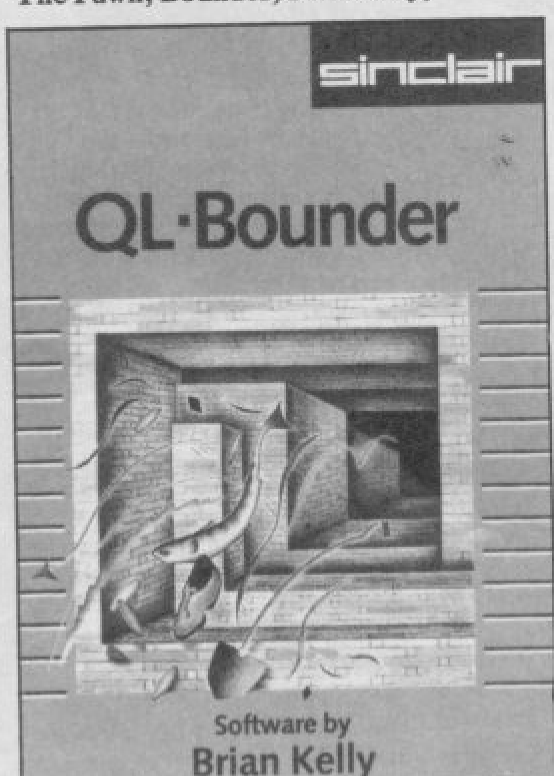
As confusion reigns over who, if anyone, will continue to produce the QL — see news pages — retailers, distributors and software houses have for the most part pledged continued support for the machine.

"The takeover, in the short term at least, is not going to affect sales of the QL to customers and we will be keeping to the same market price levels," said a spokeswoman for Boots, one of the key QL retailers.

Boots currently has two QL packages on sale in its computer shops. A QL with a free workstation — valued at £19.95 — costs £199. The second 'business package' consists of the computer, a copy of **Cash Trader** from Sinclair Research with a Brother HR-5 printer, and costs £249.95. Good value when you consider that the QL cost £199, the Brother printer retails at £150.00 and **Cash Trader** is priced at £99.

Boots has steadily increased its range of QL software since Christmas 1985. New products from Sinclair Research include **The Pawn, Bounder, Fictionary,**





Entrepreneur and **Project Planner.**

The Talent adventure games have been joined on the shelves by **Cartridge Doctor** and **GraphiQL**. The company's **QL Paint**, which was to be marketed by Sinclair Research, has not appeared. Large stocks of the product have been accumulated by Sinclair but retailers have not got hold of them.

Digital Precision has some of its titles in Boots. **Backgammon** and **Super Sprite Designer**, are soon to be joined by **Super Astrologer** and **Supercharge**, DP's SuperBasic compiler.

WH Smith is not as enthusiastic about the QL as Boots. Martin Craswell, a spokesman for the company, commented: "The QL is coming out of our line of computers. When we sell out that will be it. We don't have much stock left."

A wide range of software can still be obtained from WH Smith although it is unlikely that any new orders are going to be placed with QL software houses. Most computer branches stock titles from Talent and Digital Precision but there is a dearth of software from Sinclair Research on their shelves. However, you can obtain

Dragon Hold

THE DOORS to the Hidden Lands open back and allow you to enter the Dark Caverns. Your only protection, a dagger hanging from your belt.

The caverns comprise only one of six areas in which to seek your fortune and find the Elixir of Life, a secret guarded by a mean-looking dragon.

It's the word 'cavern' which gives the game away. Yep, this is a scrolling maze game and your on-screen alter ego is an animated masterpiece of matchstick proportions.

There is, though, rather more to it than that. There is a strong D&D role-playing element and various status windows around the screen's central maze display show your character's strength, endurance and charisma. You kick off, for example, with strength of five, endurance of 20 and charisma of four and as you explore the figures will change either up or down — your wisdom will increase. It all depends on who you encounter and what you decide to do. To begin with, I'd recommend running away from anything that moves until you learn how to handle things.

The status rating system is, in some instances, illogical. For example, wisdom starts at zero when it should have some sort of positive rating — a one or two perhaps. How else would you know where to start. Also, there are two attributes for occult power, Magic and Psi. From my days as a Dungeons and Dragons player, away from the computer, I surmised that your mind sends out Psi while objects are associated with Magic. The differences,

QL Slime

THEY said it couldn't be done. A 3D game for the QL?

Datalink Systems has proved them wrong with 3D Slime, a cross between the arcade classics Marble Madness and Q★Bert.

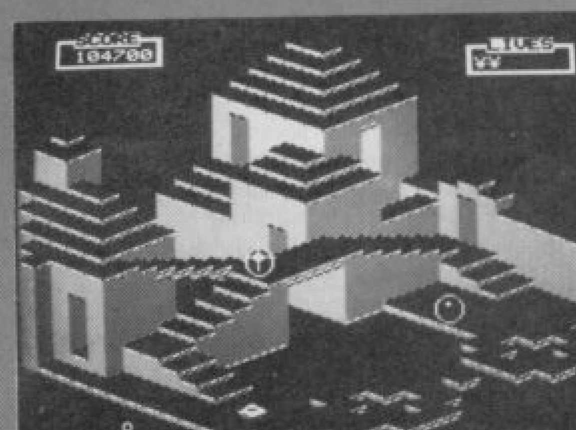
You get to play a green slime from the planet Vega, which, I suppose, makes you a vegatable.

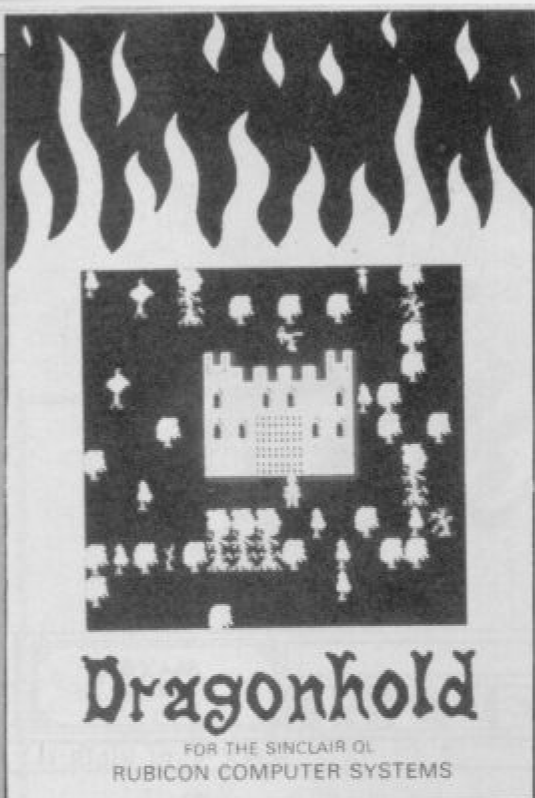
The aliens from Vaska IV have captured you and, in true sadistic fashion, have forced you into the Robocity where you must steal the Mysterious Purple Pyramids. These pyramids are scattered around the walkways and quadrants of the 3D city and guarded by robot marbles, rings and suchlike which squash anything which gets in their way. It's possible to jump over them but preferable to keep out of their way. You have three lives but it's not worth risking them on futile attempts at heroism when the only ones to benefit are the Vaskans.

As you clear each level — sucking up all the pyramids — you move on to the more complex, and differently coloured areas of the city. The number of balls increases and so do your chances of being squashed.

Control is by cursor keys or joystick but, because movement is always along diagonals, you will initially find great difficulty in getting your green blob to go where it should. Moving the joystick forward, for instance, moves to the right in some cases and forwards in others. Similar peculiarities occur with the other directional keys but, when you've been on a level once or twice you will get an intuitive feel for the direction in which you should point the joystick.

If you manage to score over 100 points, which is not difficult, you will be asked to





are not explained in the brief manual, however, and those attributes could easily have been merged into one.

Your character is controlled via joystick or cursor keys — for directions — and by a wide variety of other keys for actions. The function keys are used to talk to other characters, offer and recieve objects and cast magic.

A series of noun-verb commands can be made using the letters A to X. Each letter corresponds to a noun, such as 'C' for charm, 'O' for opal and 'S' for sword, and some also correspond to verbs such as B = break, L = light and O = open. Altogether there are eight verbs and 25 nouns to play with. Unfortunately, because the list of nouns is also a list of objects within the game, you know in advance what you will be expected to pick up and to which uses the objects are put, which takes away some of the mystery. The command menu tends to make the game inflexible for the player but easy to put together for the programmer. It also makes the character codes difficult to remember for beginners. But, once you have been playing for a few hours you do get the hang of it.

Fortunately, the combat system is better than the action control. All you have to do is catch your quarry, touch them and press the fire button. If you haven't got a sword, dagger or magic axe your endurance will plummet and you will be in need of a little light reincarnation.

Each area of the Hidden Lands can be accessed through a door from the previous one and you have to get all the important objects on one level — you can only carry 11 — before you are allowed to move on to the next.

There are 260 screens which make up the six levels of the game and it will take you several weeks to get through them and find the Elixir. The 'save game' option will help as it becomes obvious that Dragon Hold **is a test of skill and agility.**

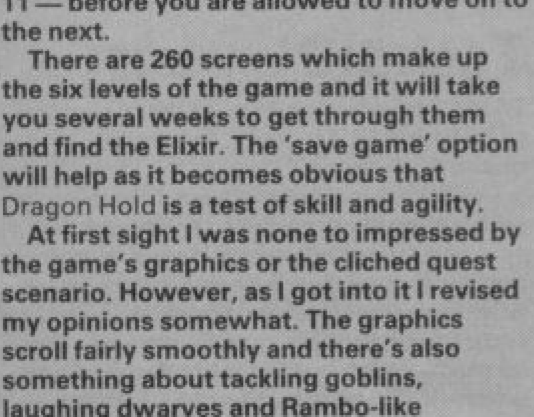
At first sight I was none to impressed by the game's graphics or the cliched quest scenario. However, as I got into it I revised my opinions somewhat. The graphics scroll fairly smoothly and there's also something about tackling goblins, laughing dwarves and Rambo-like maidens which got me really hooked.

John Gilbert

Publisher Rubicon Computer Systems, 11 Bannerdale Road, Sheffield S7 2DJ
Programmer John Moultby
Price £19.95 **Joystick**
★★★★★

a range of software by Dialog which includes home and business accounts.

Dixons is the other part of the QL triad and, during the past year, it has been promoting the machine in every way possible. The QL has been bundled with the Sinclair pocket television, a variety of disc drives and software from Digital Precision and Sinclair Research. The latest offer incorporates the machine and a thermal printer all at the phenomenal price of £179.95.



The Datalink Cad Pak produces graphics which are better than those of the Apple Macintosh

All of these retail chains rely on distributors such as Terry Blood Distribution, and Sinclair's distributors are a very disgruntled bunch at the moment. They fear that Amstrad, which has its own distribution network, will take the Sinclair range away from them. Norman Smith, managing director of TBD, commented: "We have no idea what's going on. I've only had two or three conversations with Sinclair since the Amstrad takeover. It will take a few weeks before everything is sorted out." Sources close to TBD indicate that the company has exhausted its stock of QLs and cannot get any more from Sinclair or Amstrad.

Software support

All of the major software houses which support the QL intend to continue that support and many have new products which will be launched later this year.

Freddy Vaccha, managing director of Digital Precision, says: "We intend to continue support for the customer and believe the takeover is good news. Amstrad are not incompetent at marketing and I am aware that a number of parties are interested in buying the rights to the QL or producing a QL upwards-compatible machine.



Supercharge, the SuperBasic compiler, will continue to produce minor miracles

"Our products are doing very well. For instance, **Supercharge** has attracted a lot of interest from abroad and over 50 universities have asked about it. We've also had enquiries from physics labs, and mathematics departments. These people must have QLs or they wouldn't have been interested in our existing products."

Vaccha says he is confident that people will continue to buy the QL although stocks are low in Britain. "I know that there are between one and ten thousand QLs sitting around in South Korea, waiting to be shipped, so there are stocks if people want them."

Digital Precision has several new products in the pipeline. The first is an extended version of the **Super Astrologer** program with four cartridges.

Talent Computer Systems also intends to continue its development of QL software. The company, famed for **GraphiQL** and the adventure games **Zkul** and **West**, has a number of products under development and ready for release.

Talent's Veronica Colin says, "Our next product is **TechniQL** a two-dimensional drawing package similar to **GraphiQL**.

"I think with the QL we will have to go back to the days when we were doing most of our business by mail order but I don't think that QL software is going to dry up."

▶ 8

put your name in the hall of 3D Slime. This high score table can be saved when you have finished play and loaded back in when you want to restart the game.

For those of you who have QLs at work and want to play this deliciously slurpy 3D game Datalink has included a fake spreadsheet package within the game. When the boss enters the room just press *F5* and the game is replaced by several columns of figures which are up-dated without you having to touch the keyboard. The figures are, according to my calculations, all wrong, as is the continually adjusted total at the bottom of the screen. But it's okay now the boss has gone. You can use *F5* again to toggle back to the game.

Datalink systems is a delightful new company with plenty to say regarding the QL. It has a humorous approach to programming and is not bound by the conventions of what the machine is or isn't supposed to be able to do.

John Gilbert

Publisher Datalink Systems, Glangors, Ynslas, Borth, Dyfed SY24 5JU
Price £12.95
Joystick
★★★★

81 ◄

New QL firms

Several new companies have sprung up during the past few months and still intend to launch new products and stay with the QL.

DS Enterprises, a distribution company set up by David Storton, provides hardware and software to the trade as well as producing its own range of software. Storton says, "I am worried about the Amstrad takeover and I've suffered under it, but I think that even if the QL was dropped now customers would still need support for some time to come."

DS Enterprises has just launched two utilities. The first is **QL Ram Disc**, and the second is **Sign Designer** which will produce posters for shop window displays. Using the package you can enlarge the QL character set.

3D Slime authors Datalink Systems has brought out an icon graphics package, called **Cad Pak**. An icon menu system similar to that used on the Apple Macintosh, enables you to produce high resolution two-dimensional graphics and text in colour — something which the Mac cannot do. **Cad Pak** is similar to **QL Paint**, from Sinclair Research, but unlike the Sinclair package you have to stick with the graphics textures set up within the package.

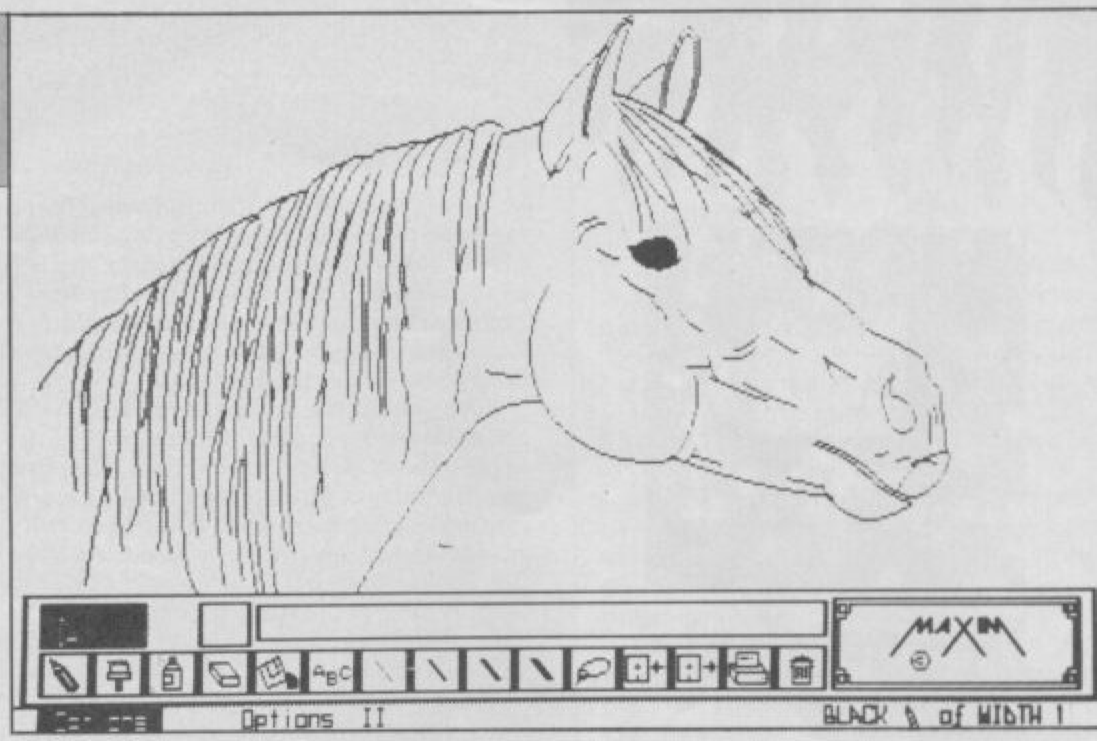
Customer support

Leon Heller, chairman of Quanta, the QL Users' Group shares the optimism of companies such as Digital Precision, Talent and DS Enterprises. He confirms that Quanta will continue and even extend its support services for QL owners. Heller says: "A few days before the takeover Psion asked if Quanta would take queries from members of QLUB whose subscriptions had run out.

"Since then I've written to Amstrad to suggest that we'll handle all the customer support for the QL from now on." More details can be obtained from Leon Heller, 65 Flanders Mansions, Flanders Road, London W4 1NF. Alternatively, you could contact the Club secretary, Brian Pain, at 24 Oxford Street, Stony Stratford, Milton Keynes MK11 1JU.

Following the Amstrad/Sinclair deal, although Amstrad will continue to supply spare parts for the QL, it will not deal with the repair of faulty computers. If your QL blows up or does not work for some other reason while it is under guarantee you must take it back to your local retailer. If your guarantee has run out there's not much you can do as there are no independent QL repair outfits that we know of. If I hear from anyone who repairs QLs I'll let you know next month.

Digital Precision, 91 Manor Road, Higham Hill, London E17
Talent, Curran Building, 101 St James Road, Glasgow G4 0NS
DS Enterprises, 25 Trinity Rise, London SW2 2QP
Datalink Systems, Glangors, Ynslas, Borth, Dyfed SY24 5JU.



TechniQL

TALENT has released an up-rated version of its GraphiQL/QL Paint, for use in technical drawing.

Facilities have been added, for example, which simplify drawing to scale and the screen viewing area is now square and may be moved over a considerably larger working area. Data compression techniques, though, mean a drawing can be made which is still highly detailed and within which small areas can be given extra attention.

A unique method of 'cell' drawing allows you to, in effect, draw on 'overlays' and then superimpose them on-screen in the positions required. These overlays can be individually edited, scaled and mirrored, as required, on to the main body of a drawing.

The program is operated using either commands selected from five cursor-addressable menus, or by commands entered directly from the keyboard. Colour selection is by cursor control from the full colour palette available to each QL mode.

I said the drawing area was large and the cursor can be positioned over a −32768 to +32767 pixel range on the x- and y-co-ordinates. Location of an off-screen cursor is also possible by direct command. The cursor colour can be changed, up to eight cursor positions may be indexed for reference within a large drawing and the cursor may be 'jumped' to any of these eight positions from a menu selection and subsequently returned to the starting position. Cursor movement can be incremented by single pixels, grid co-ordinates (which are user definable), or in multiples of 8 and 32 pixels by a single cursor key-press.

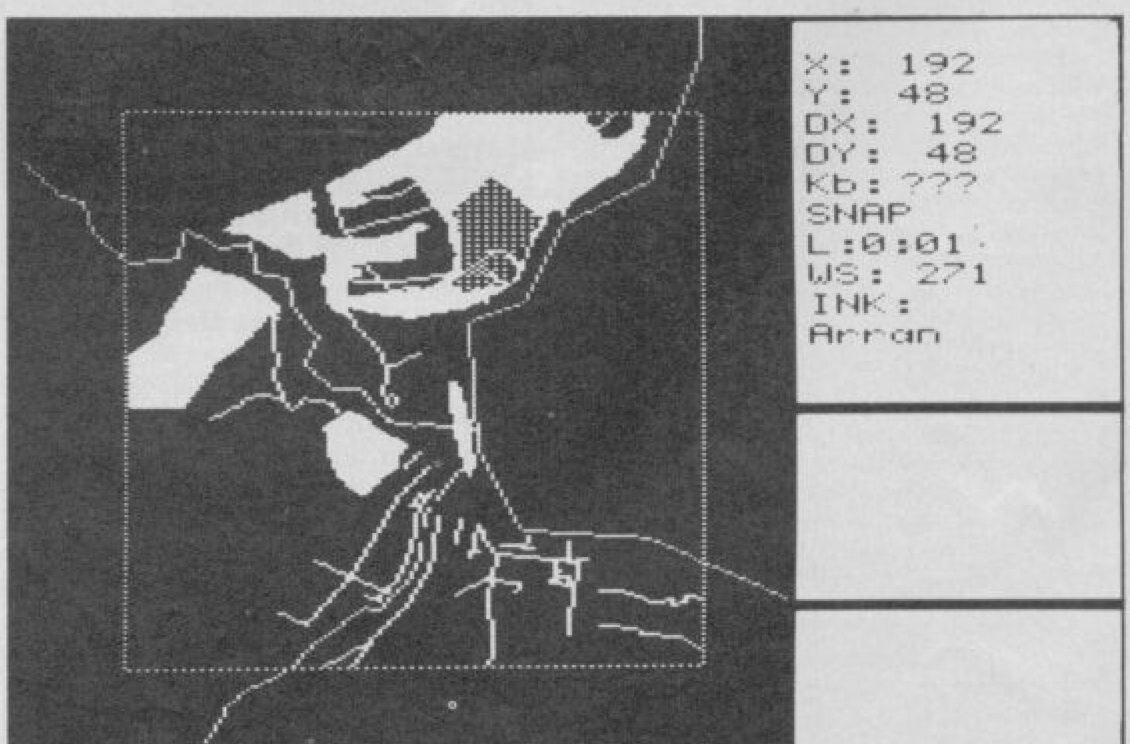
The 'D—co-ord' cursor position indicator normally echoes the x- and y-co-ordinates, but it can also be used like a kind of ruler.

It's a very easy package to use. The TechniQL display has three windows to provide information during drawing: the lower window indicates the instruction required; the middle window gives information about the current positions of objects within the cell and the upper window is a status window such as cursor position, largest block of memory available, pixel width of the screen (at the current scale), ink colour, name of the cell being edited and the amount of memory remaining to the operating system.

Well up to the high standard of previous Talent releases. A neat and very easy to use tech drawing tool.

Ron Massey

Publisher Talent
Price £49.95
★★★★★



Introduction

Anyone interested in adventures must almost certainly have come across adventure writing programs like Gillsoft's **The Quill.**

The interest in these programs is that you often feel you'd like to write an adventure — work out the plot, fill the caverns with trolls and gold, plan the map and make fiendish problems to solve.

Yet where do you start? Unless you're a good programmer the whole idea is pretty daunting.

The **Adventure Builder System** — this month's program listing — is a complete system for designing and running your own adventures. It's quite chunky so it's being printed in two parts, this month and next.

The Adventure Builder System

The program is in two main sections. Listing 1 (printed this month) is the adventure builder itself. And Listings 2 to 4 (this month) and Listings 5 and 6 (next month) are a demonstration adventure showing how to use the adventure builder. Listings 2 to 6, your own versions of which you will develop when writing your own adventure, give the core program (Listing 1) all the data needed for the adventure: number of rooms, number of objects, room descriptions and so on. Before thinking about designing your own adventure take a careful look at it how the demonstration adventure works. Also essential is to plan your adventure thoroughly first by mapping it out on paper before even thinking about using the **ABS.** Your map should show each location numbered, and all the objects identified by type and starting location.

When an **ABS** adventure is running it shows on-screen the current location description (plus graphics if any) together with a list of objects visible at the location. It prompts with "What next?" and any input text command (ie 'Get Torch') is printed on-screen and then analysed (usually into 'Verb' and 'Noun') and acted upon by the **ABS.** In other words it operates just like a conventional adventure program.

The main **ABS** program (Listing 1) also includes the data for the essentials: movement input (Go North or N etc) and also for the common verbs:

Get (or *Take*)
Drop
Look (or *L* or *R*)
Examine
Quit (or *Stop*)
Inventory (or *I* or *List*)
Save
Load.

Adventure Builder

Tom Frost presents the first part of **Adventure Builder System**

Loading and saving the listings

The procedure for loading the listings and saving them to tape is quite complex but, if you follow the instructions correctly at the end of this first month the program will stand on its own — despite the fact that only a part of the demonstration adventure has been typed in — and you will be able to explore a monster-less adventure. (Monsters next month!)

First the code generator (Listing 1) has to be typed in. Once that is in save a master copy by *Goto* 9990. Now add the data lines for the demonstration adventure (Listing 2) and save by *Goto* 9990 to a blank tape (Tape A).

Now enter Listing 3 and save it on a second blank tape by *Goto* 120, verify it and do not rewind it (Tape B).

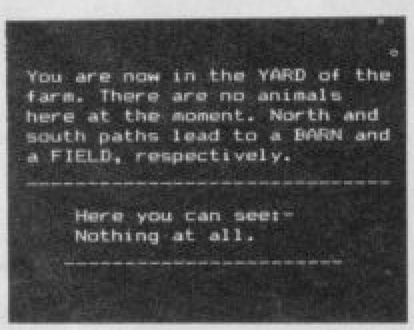
Type in Listing 4, which is part of the demonstration adventure and save it on Tape B by *Goto* 9990, verify and do not rewind the tape.

Load Tape A and enter the following numbers to the on-screen prompts:
14,5,9,5,22,2,13,3,15,0,7
then save the data on Tape B (there are two sections to save). Rewind and load Tape B. Stop tape when prompted, delete line 9949, enter *Goto* 9950 and restart the tape. You should now be able to explore all the locations and perform no action other than *Open*. After checking that the basic program has been correctly entered, delete Line 9955 and alter Line 9991 to read:
9991 *Save* "System" *Code Save, Len* and re-save, after the loader, by *Goto* 9990.

The remainder of the listing for the demonstration adventure will be given next month.

Note: Where characters are underlined in Listing 4 please enter the appropriate user-defined character instead.

Listing 1: The code generator




```
  2 CLEAR 60000
  3 GO SUB 400
  4 PRINT AT 8,0;"Enter ""L"" t
o LIST program or any other lett
er to generate CODE."
  5 INPUT l$
  6 IF l$="l" OR l$="L" THEN  L
IST
  7 GO SUB 400
  8 PRINT  INK 2; BRIGHT 1;AT 8
,3;"WAIT....DATA being collated"
 10 RESTORE 30
 15 FOR x=64430 TO 65077
 20 READ a: POKE x,a: NEXT x
 25 REM CODE DATA
 30 DATA 205,190,251,62,21,50,6
0,250,24,33,58,137,92,254,2,192,
62,3,50,137,92,229,6,0,205,0,14,
225,201,58,137,92,71,62,24,144,2
54,22,40,216
 31 DATA 50,60,250,33,61,250,6,
55,54,0,35,16,251,33,61,250,54,1
,35,54,1,35,54,0,33,106,92,54,8,
62,22,215,58,60,250,215,62,0,215
,62
 32 DATA 62,215,62,22,215,58,60
,250,215,58,61,250,215,60,50,61,
250,62,42,215,1,0,0,205,61,31,20
5,191,2,33,8,92,79,62,13,190,202
,181,252,62
 33 DATA 12,190,202,132,252,62,
8,190,202,132,252,58,61,250,254,
32,202,48,250,121,254,32,40,13,2
54,47,218,48,250,254,91,210,48,2
50,79,24,9,79,58,61,250
 34 DATA 254,3,218,48,250,65,62
,22,215,58,60,250,215,58,61,250,
61,215,60,50,61,250,120,245,215,
241,42,62,250,17,63,250,25,119,4
2,62,250,35,34
 35 DATA 62,250,17,50,0,33,200,
1,205,181,3,195,243,251,58,61,25
0,254,3,218,48,250,61,50,61,250,
62,22,215,58,60,250,215,58,61,25
0,215,61,50,61,250
 36 DATA 62,32,215,42,62,250,1,
62,250,9,54,0,58,62,250,61,50,62
,250,195,120,252,58,61,250,254,3
,218,48,250,62,22,215,58,60,250,
215,58,61,250
 37 DATA 61,215,62,32,215,17,25
,0,33,250,0,205,181,3,33,63,250,
54,32,35,229,6,31,126,254,48,56,
3,35,16,248,225,17,100,250,62,31
,144
 38 DATA 6,0,184,250,251,252,12
6,18,35,19,16,250,24,17,79,71,12
6,18,35,19,16,250,62,0,145,71,17
5,19,18,16,252,33,93,250,6,31,12
6,254,0,32
 39 DATA 3,43,16,248,126,254,32
,40,3,43,16,248,5,72,6,0,33,64,2
50,9,6,0,17,107,250,126,18,35,19
,16,250,33,0,0,17,100,250,6,0,26
,190
 40 DATA 32,10,35,19,16,248,126
,50,114,250,24,17,72,6,0,9,35,62
,199,190,40,2,24,225,33,114,250,
54,200,33,0,0,17,107,250,6,0,26,
190,32
 41 DATA 10,35,19,16,248,126,50
,115,250,24,17,72,6,0,9,35,62,19
9,190,40,2,24,225,33,115,250,54,
201,58,115,250,71,62,0,184,216,3
3,24,251,58
 42 DATA 115,250,6,0,79,9,62,1,
190,192,58,115,250,6,0,128,50,11
5,250,201,33,0,0,6,0,54,0,35,16,
251,17,0,0,6,0,58,24,251,33,124,
251
 43 DATA 190,40,4,35,16,250,201
,79,62,0,144,18,19,35,121,24,243
,33,0,0,6,0,54,0,35,16,251,17,0,
0,6,0,62,99,33,124,251,190,40
 44 DATA 4,35,16,250,201,79,62,
0,144,18,19,35,121,24,243,17,7,0
,33,0,0,6,0,58,24,251,190,40,3,2
5,16,250,58,115,250,71,35,16,253
,126
 45 DATA 50,115,250,201,33,24,2
51,17,130,250,1,150,0,237,176,20
1,33,130,250,17,24,251,1,150,0,2
37,176,201,33,24,251,6,150,54,0,
35,16,251,1,24,251
 46 DATA 62,0,2,33,99,0,9
 60 RESTORE 66
 62 FOR x=64048 TO 64059
 64 READ z: POKE x,z: NEXT x
 66 DATA 17,5,1,33,125,1,205,18
1,3,195,18,252
100 FOR x=1 TO 11: BEEP .1,x: N
EXT x
102 FOR x=10 TO 1 STEP -1: BEEP
 .1,x: NEXT x
105 GO SUB 400
110 PRINT AT 2,0;"Enter total n
umber of VERBS,    excluding GO,
 GET(or TAKE),     DROP, EXAMINE
, LOOK(or L, or R),INVENTORY(or
I, or LIST),QUIT,  SAVE, LOAD an
d single letter    entries for d
irections ie:-     (N,S,E,W,U,D)
 as they have      already been
entered  with the  following 'vb
' numbers."
115 PRINT AT 12,8;"GO.........0
"
116 PRINT AT 13,8;"GET........1
"
117 PRINT AT 14,8;"DROP.......2
"
118 PRINT AT 15,8;"EXAMINE....3
"
119 PRINT AT 16,8;"LOOK.......4
"
120 PRINT AT 17,8;"INVENTORY..5
"
121 PRINT AT 18,8;"QUIT.......6
"
122 PRINT AT 19,8;"SAVE.......7
"
123 PRINT AT 20,8;"LOAD.......8
"
125 INPUT v
126 LET v=v+22
127 GO SUB 400
128 PRINT  INK 7; PAPER 2; BRIG
HT 1;AT 3,6;" VERB-CHECK LENGTH
"
129 PRINT AT 8,0;"Enter the num
ber of letters to   be used to d
etermine a match    between inp
ut and database"
130 PRINT' INK 2;AT 13,4;"Enter
 a value between";AT 15,10;"3 an
d 7"
131 INPUT vl
132 IF vl<3 OR vl>7 THEN  BEEP
.5,20: GO TO 127
133 LET vp=vl+1: LET vpp=vp+1
134 LET DAV=64040-(v*vp)
140 GO SUB 400
150 PRINT AT 8,2;"ENTER total n
umber of OBJECTS    which could f
orm part of the         ADVENTURER
'S Inventory"
155 INPUT MOB
156 IF MOB>50 THEN  PRINT AT 12
,4;"Sorry! That's too many!": BE
EP .5,20: PAUSE 100: GO TO 140
160 GO SUB 400
161 PRINT  INK 7; PAPER 1; BRIG
HT 1;AT 3,6;" NOUN-CHECK LENGTH
"
162 PRINT AT 8,0;"Enter the num
ber of letters to   be used to d
etermine a match    between inp
ut and database"
163 PRINT  INK 1;AT 13,4;"Enter
 a value between";AT 15,10;"3 an
d 7"
164 INPUT nl
165 IF nl<3 OR nl>7 THEN  BEEP
.5,20: GO TO 160
166 LET np=nl+1: LET npp=np+1
170 GO SUB 400
171 PRINT AT 8,0;"ENTER maximum
 length of object    description
 which will be           printed o
n screen."
175 INPUT L
176 IF L>32 THEN  PRINT AT 12,0
;"Maximum length on one line is
32": BEEP .5,20: PAUSE 100: GO T
O 170
179 LET ayas=0
180 GO SUB 400
190 PRINT AT 8,0;"ENTER number
of objects which   will change d
escription during               the
 adventure               (eg A TORCH
and A lit TORCH)"'"  If this is
 not applicable               then e
nter ""0"""
195 INPUT MCOB
196 IF ayas=0 AND MCOB>7 THEN
PRINT AT 19,2;"Are you absolutel
y SURE?": BEEP .5,20: PAUSE 100:
 LET ayas=1: GO TO 180
200 GO SUB 400
210 PRINT AT 8,0;"  ENTER numbe
r of OTHER WORDS      which you w
ish the programme           to re
cognise."
215 INPUT NON
220 LET N=MOB+NON+22
225 LET DAN=DAV-(N*np)-5
230 GO SUB 400
235 PRINT AT 8,0;"ENTER MAXIMUM
 number of OBJECTS      which can
 be carried."
240 INPUT MAX
```

```
 245 GO SUB 400
 255 PRINT AT 8,0;"ENTER the num
ber of LOCATIONS            in the
ADVENTURE."
 260 INPUT NOR
 265 GO SUB 400
 270 PRINT  PAPER 2; INK 7; BRIG
HT 1;AT 6,6;" THE SCROLL FACTOR
"
 272 PRINT AT 10,0;"For a split
screen SCROLL EFFECTenter the nu
mber of lines at the top of the
screen which should        remain
 stationary."
 273 PRINT : PRINT "  For no suc
h effect ENTER '0'"
 277 INPUT SCRO
 279 IF SCRO>15 THEN  PRINT AT 1
8,0;"That would not look quite r
ight!": BEEP .5,20: PAUSE 100: G
O TO 265
 280 LET SCRO=23-SCRO
 285 GO SUB 400
 290 PRINT AT 8,0;"In which LOCA
TION number does        the ADVE
NTURE begin?"
 295 INPUT BEG
 330 POKE 64821,DAV-256*INT (DAV
/256): POKE 64822,INT (DAV/256)
 335 POKE 64860,DAN-256*INT (DAN
/256): POKE 64861,INT (DAN/256)
 340 POKE 64903,MCOB: POKE 64924
,(MOB-MCOB): POKE 64934,MOB: POK
E 64944,MOB
 345 POKE 64960,(MOB+1): POKE 64
972,MOB: POKE 64997,(MOB+1)
 350 POKE 64982,MOB: POKE 65012,
NOR: POKE 64453,SCRO
 355 POKE 65072,BEG
 360 POKE 64750,vl: POKE 64772,v
l: POKE 64827,vl: POKE 64810,nl:
 POKE 64866,nl
 365 GO SUB 400
 370 PRINT AT 6,0;"If ALL DATA h
as been entered in   the appropr
iate lines, then     PRESS ENTER
 to generate the        ADVENTURE
 SYSTEM CODE."
 372 PRINT  INK 2;AT 13,4;"Else
ENTER ""S"" to STOP."
 373 INPUT a$
 374 IF a$="s" OR a$="S" THEN  S
TOP
 375 GO TO 500
 400 CLS
 405 PRINT  PAPER 0; INK 6; BRIG
HT 1;AT 1,6;" ADVENTURE BUILDER
"
 410 RETURN
 500 GO SUB 400
 502 PRINT  INK 2; BRIGHT 1;AT 8
,3;"WAIT....DATA being collated"
 505 RESTORE 1000
 506 DIM v$(v,vl)
 508 FOR y=1 TO v
 510 READ v$(y)
 515 FOR x=1 TO vl
 520 POKE (((DAV-vpp)+(y*vp)+x))
,CODE v$(y,x)
 525 IF CODE v$(y,x)=32 THEN  PO
KE (((DAV-vpp)+(y*vp)+x)),0
 530 NEXT x
 535 READ z
 540 POKE ((DAV-1)+(y*vp)),z
 545 NEXT y
 550 POKE (DAV+(v*vp)),199
 600 DIM o$((MOB),L)
 602 RESTORE 2000
 603 DIM n$((MOB+NON+22),nl)
 604 IF MCOB=0 THEN  GO TO 670
 605 FOR y=1 TO MCOB
 610 READ n$(y)
 615 FOR x=1 TO nl
 620 POKE (((DAN-npp)+(y*np)+x))
,CODE n$(y,x)
 625 IF CODE n$(y,x)=32 THEN  PO
KE (((DAN-npp)+(y*np)+x)),0
 630 NEXT x
 635 READ z
 640 POKE ((DAN-1)+(y*np)),z
 645 READ b$
 650 LET o$(y)=b$
 655 READ b$
 660 LET o$(y+MOB-MCOB)=b$
 661 NEXT y
 662 FOR x=0 TO ((MCOB*np)+1)
 663 POKE (DAN+x)+((MOB-MCOB)*np
),PEEK (DAN+x)
 665 NEXT x
 670 FOR y=(MCOB+1) TO (MOB-MCOB
)
 675 READ n$(y)
 680 FOR x=1 TO nl
 685 POKE (((DAN-npp)+(y*np)+x))
,CODE n$(y,x)
 690 IF CODE n$(y,x)=32 THEN  PO
KE (((DAN-npp)+(y*np)+x)),0
 695 NEXT x
 700 READ z
 705 POKE ((DAN-1)+(y*np)),z
 710 READ b$
 715 LET o$(y)=b$
 720 NEXT y
 730 FOR y=(MOB+1) TO (MOB+NON+2
2)
 735 READ n$(y)
 740 FOR x=1 TO nl
 745 POKE (((DAN-npp)+(y*np)+x))
,CODE n$(y,x)
 750 IF CODE n$(y,x)=32 THEN  PO
KE (((DAN-npp)+(y*np)+x)),0
 755 NEXT x
 760 READ z
 765 POKE ((DAN-1)+(y*np)),z
 770 NEXT y
 775 POKE (DAN+(N*np)),199
 780 RESTORE 3000
 785 LET DMOV=DAN-(NOR*7)-5
 787 LET DMOVL=DMOV-256*INT (DMO
V/256): LET DMOVM=INT (DMOV/256)
 788 POKE 65009,DMOVL: POKE 6501
0,DMOVM
 790 FOR y=DMOV TO (DMOV+(NOR*7)
-1)
 795 READ a: POKE y,a: NEXT y
 800 RESTORE 4000
 801 FOR x=65078 TO (65078+((MOB
-1)*4)) STEP 4
 802 POKE x,35: POKE x+1,62: POK
E x+3,119
 803 READ a: POKE x+2,a
 804 NEXT x
 805 POKE 65078+(MOB*4),201
 810 LET PBS=65078+(MOB*4)+5
 820 LET PBSL=PBS-256*INT (PBS/2
56): LET PBSM=INT (PBS/256)
 825 POKE 64931,PBSL: POKE 64932
,PBSM
 826 POKE 64941,PBSL: POKE 64942
,PBSM
 827 POKE 64969,PBSL: POKE 64970
,PBSM
 828 POKE 64979,PBSL: POKE 64980
,PBSM
 860 FOR x=1 TO 11: BEEP .1,x: N
EXT x
 865 FOR x=10 TO 1 STEP -1: BEEP
 .1,x: NEXT x
 867 REM USE by BASIC
 868 LET SAVE=DMOV-10: LET LEN=6
5368-SAVE
 869 LET SAVEL=SAVE-256*INT (SAV
E/256): LET SAVEM=INT (SAVE/256)
 870 LET LENL=LEN-256*INT (LEN/2
56): LET LENM=INT (LEN/256)
 871 RESTORE 874
 872 FOR x=0 TO 9
 873 READ z: POKE (64116+x),z: N
EXT x
 874 DATA SAVEL,SAVEM,MAX,MOB,LE
NL,LENM,PBSL,PBSM,DMOVL,DMOVM
 875 GO SUB 400
 885 PRINT AT 8,2;"Now prepare t
o save to tape.     Press any ke
y when ready."
 886 PRINT AT 11,2;"If uncertain
 then ENTER ""s""               to
 STOP."
 887 INPUT a$
 890 IF a$="s" OR a$="S" THEN  S
TOP
 900 CLS : PRINT  PAPER 0; INK 6
; BRIGHT 1;AT 2,6;" ADVENTURE BU
ILDER "
 910 PRINT AT 8,8;"SAVING..."
 915 SAVE "SYSTEM"CODE SAVE,LEN
 920 SAVE "OBJECTS" DATA o$()
 925 PRINT AT 8,0;"  Before the
BASIC listing and          CODE a
re LOADED                   "; INK
 2;"  CLEAR ";SAVE-1; INK 0;"
                  must be entered"
 927 PAUSE 100: BEEP .5,10
 930 PRINT  PAPER 2; INK 7; BRIG
HT 1;AT 17,2;" Now REWIND tape t
o VERIFY "
 932 PAUSE 100: BEEP .5,10
 935 PRINT AT 19,0;"PRESS ANY KE
Y when tape rewound."
 940 PAUSE 0
 945 CLS : PRINT  PAPER 0; INK 6
; BRIGHT 1;AT 2,6;" ADVENTURE BU
ILDER "
 950 PRINT AT 8,8;"VERIFYING..."
 955 VERIFY "SYSTEM"CODE SAVE,LE
N
 960 VERIFY "OBJECTS" DATA o$()
 965 CLS
 970 STOP
 999 REM VERB 0 to 8 DATA
1000 DATA "GO",0,"N",0,"S",0,"E"
,0,"W",0,"U",0,"UP",0,"D",0,"GET
",1,"TAKE",1,"DROP",2,"EXAMINE",
3,"LOOK",4,"L",4,"R",4,"INVENTOR
Y",5,"I",5,"LIST",5,"QUIT",6,"ST
OP",6,"SAVE",7,"LOAD",8
1002 REM OTHER VERB DATA
1999 REM OBJECTS which CHANGE
2019 REM OTHER OBJECTS
2189 REM OTHER NOUNS
2190 DATA "NORTH",MOB+1,"SOUTH",
MOB+2,"EAST",MOB+3,"WEST",MOB+4,
"UP",MOB+5,"DOWN",MOB+6,"N",MOB+
1,"S",MOB+2,"E",MOB+3,"W",MOB+4,
"U",MOB+5,"D",MOB+6,"LOOK",99,"L
",99,"R",99,"LIST",99,"I",99,"IN
VENTORY",99,"QUIT",99,"STOP",99,
"SAVE",99,"LOAD",99
2999 REM MOVEMENT DATA
3999 REM OBJ ORIG LOCATION
9990 SAVE "ABS TDF" LINE 1
9991 CLS
9992 GO SUB 400
9993 PRINT  INK 2;AT 8,3;"Now re
wind tape to VERIFY"
```

Your adventure

Once you've got the demonstration adventure working the next thing is to start your own adventure.

When you have planned it out on paper you are ready to begin entering the data into the core **ABS** program (Listing 1).

The easiest way to understand what to do is to follow how the demonstration adventure was set up. The core program provides a number of on-screen prompts which must be satisfied and all the necessary data must be added.

So here goes. For each section — each on-screen prompt from the builder program — follow the format shown and look at how that particular section is set up by the demo program example. After each section prompt the number in brackets is the response appropriate for the demo program.

a) How many verbs? (17)

The data for these is entered in Lines 1003 to 1999 (see Listing 2) of the demo program in the format:

Listing 2: Data lines for demonstration adventure

```
9994 PAUSE 250: BEEP 1,20
9995 PRINT AT 12,4;"Press ENTER
when ready"
9996 PAUSE 0
9997 GO SUB 400
9998 PRINT AT 8,3;"VERIFYING....
...."
9999 VERIFY "ABS TDF"
1001 REM listing 2
1003 DATA "OPEN",9,"UNLOCK",10,"
DIG",11,"LIGHT",12,"EXTINGUISH",
13,"CLIMB",14,"DESCEND",15
1005 DATA "CLOSE",16,"TOSS",17,"
FILL",18,"LOCK",19,"WEAR",20,"RE
MOVE",21
1007 DATA "ASCEND",14,"SHUT",16,
"JUMP",22,"USE",23
2000 DATA "COAT",1,"A tartan COA
T","A tartan COAT (worn)"
2001 DATA "TORCH",2,"A small TOR
CH","A lit TORCH"
2020 DATA "BOX",3,"A wooden BOX"
2021 DATA "SPADE",4,"A short SPA
DE"
2022 DATA "KEY",5,"A bronze KEY"
2023 DATA "WOOD",6,"Splinters of
 WOOD"
2024 DATA "DIAMOND",7,"A large D
IAMOND"
2191 DATA "DOOR",16,"CUPBOARD",1
7,"LAWN",18,"STAIRS",19,"LADDER"
,20
2192 DATA "GATE",21,"HOLE",22,"G
ARDEN",23,"FIELD",24
2194 DATA "SAFE",25,"PATCH",26,"
JUMP",27,"DIG",22
```

Data "Open" 9, "Unlock", 10 ie the verb (in full), followed by its assigned number. As the verb numbers (vb) 0 to 8 are already assigned the first additional verb takes the value 9.

Synonomous verbs (eg *Shut* and *Close*) are allocated the same number but count as separate entries when responding to 'How many verbs'.

b) Verb length check (5)

The **ABS** offers a choice (between 3 and 7) for the number of leading letters which will be used to determine a match between player input and the adventure database. The selection of 4 or 5 is usual. If 3 is selected confusion could arise between inputs such as Feed and Feel, both of which would be considered as Fee.

c) How many objects? (9)

This refers to the objects which could be included in the Inventory of the adventurer.

For DATA entry details, see Section (E)

d) Maximum length of object description (22)

Enter here the number of characters in the *longest* object description.

e) How many objects can have an altered description? (2)

This refers to items such as "A small Torch" and "A lit Torch". The Data for these objects is entered in Lines 2000 to 2018 (see Listing 2 of the demo program) in the following format:

Data "Coat", 1, "A tartan COAT", "A tartan COAT (worn)"
Data "TORCH", 2, "A small TORCH", "A lit TORCH"
ie The word which would be typed, the assigned number, the originai description, the changed description.

The description of objects is held in the string array o$ (*x*, *y*), where *x* is the total number of objects and *y* is the character length of the longest description.

Those objects which can alter during the course of the adventure must be allocated the first and last numbers of the string array. See list of DATA for demonstration program where "A tartan COAT" and "A small TORCH" are objects 1 and 2 while their corresponding changed versions are objects 8 and 9.

The Data for the remaining objects is entered in Lines 2020 to 2188 in the format:

Data "BOX", 3, "A wooden BOX", 4, "A short SPADE", . . . etc

Listing 3: Demonstration adventure loader

```
3001 DATA 1,0,3,0,0,0,0
3002 DATA 2,0,0,0,0,0,6
3003 DATA 3,1,7,0,0,0,0
3004 DATA 4,0,9,5,0,0,0
3005 DATA 5,0,10,0,4,0,0
3006 DATA 6,0,0,7,0,2,11
3007 DATA 7,3,13,8,6,0,0
3008 DATA 8,0,0,9,7,0,0
3009 DATA 9,4,0,10,7,0,0
3010 DATA 10,5,15,0,9,0,0
3011 DATA 11,0,0,0,0,6,0
3012 DATA 12,0,0,13,0,0,0
3013 DATA 13,7,0,14,12,0,0
3014 DATA 14,0,0,15,13,0,0
3015 DATA 15,10,0,0,14,0,0
4000 DATA 4,10,0,1,0,0,0,0,0
  10 CLEAR 63400
  20 BORDER 7: PAPER 7: INK 0: C
LS
  30 PRINT  INK 1; BRIGHT 1;AT 2
,3;" DEMONSTRATION ADVENTURE  "
  40 PRINT AT 4,9;"Written using
"
  50 PRINT  PAPER 0; INK 6; BRIG
HT 1;AT 6,3;" ADVENTURE BUILDER
SYSTEM "
```

f) Noun length check (5)

This is similar to 'Verb length check' ... and is variable between 3 and 7. The value can be different from that chosen for Verbs.

g) Other words (13)

The first assigned number for these words (Door, Stairs etc) is calculated as follows:
Total number of objects + 7
eg In the demonstration program this produced the number 16 for Door. (Total number of obects (9) + 7 = 16). The Data is entered in Lines 2190 to 2988 in the format: Data "DOOR", 16, "CUPBOARD", 17 etc

h) Maximum inventory (3)

Enter here the maximum number of items which the adventurer is allowed to carry at any one time.

i) Number of locations (15)

Enter here the total number of locations in the adventure.

j) Scroll routine (0)

ABS contains a split-screen technique which can be used in two ways:
1) If it is required that the top X number of lines remain on screen, then an entry here of Xwill scroll the text "behind" these lines when the screen is full; and
2) If the number of lines required to stay on screen is is variable (eg) after "Here you can see" section) then this can be achieved by entering 0 as this response and by adding *Poke* 64453, *Peek* 23689-1 at the appropriate place in the BASIC listing.

k) Starting location (7)

Enter here the number of the location at which the adventure commences.

l) Movement data

The Data to control movement is entered in Lines 3000 to 3998 as 7 numbers for each location as follows:
DATA 7,3,13,8,6,0,0
The first number is the location number, followed by the number of the six locations which would be reached by entering N,S,E, W,U and D, respectively. An entry of 0 indicates no exit in that direction.

The DATA entered here should take no account of the need to remove obstacles or unlock doors etc as such restrictions can be accomodated by the Basic program, in lines 1005 to 1089.

See the example in the demonstration program at lines 1005 and 1010 (see Listing 4).

m) Object status table

Each object will at any time have one of the following numbers allocated to it:
a) 0 — the object is 'invisible'
b) 99 — the object is included in Inventory
c) Location number — the object currently resides at this location and will appear on screen after "Here you can see" when that location is entered.

The data for start-up positions is entered in Lines 4000 onwards (see Listing 2 of demo program).
DATA 4,10,0,1, etc.
This indicates that object 1 is at Location 4, Object 2 is at Location 10 and so on. An entry must be made for each object.

n) Save and load routines

These routines can be used on a temporary basis either effecting a save into and load from Ram or as a permanent measure to tape.

Listing 4: Part 1 of main demonstration adventure

```
  60 PRINT AT 8,10; T.D.FROST"
  70 PRINT  PAPER 0; INK 5; BRIG
HT 1;AT 11,9;" NOW LOADING "
  80 PRINT  INK 2;AT 15,0;"  The
 objective of this short       ad
venture is quite simply        t
o take possession of a
   large DIAMOND."
  90 PRINT AT 18,0;""
 100 INK 7
 110 LOAD "ADVENTURE"
 120 SAVE "INTRO" LINE 10
  45 LET r$(1)="You can't do tha
t."
  50 FOR x=1 TO 4
  52 IF r$(x,1)="*" THEN  LET x=
5: INK 6: GO TO 195
  54 RANDOMIZE USR ss: PRINT  IN
K 5;r$(x): LET r$(x)="*"
  56 NEXT x
  58 GO TO 195
 100 BORDER 0: PAPER 0: INK 6: B
RIGHT 1: CLS
 102 GO SUB 7000+PEEK f*10
 104 IF PEEK f=11 AND PEEK (o+9)
<>99 THEN  GO TO 195
 105 RANDOMIZE USR 64930
 109 PRINT TAB 3; PAPER 1;"A
                          G"
 110 PRINT TAB 3; PAPER 1;"A"; I
NK 7;" Here you can see:-     ";
INK 6;"G"
 115 LET he=0
 120 FOR x=0 TO (MOB-1)
 122 IF PEEK (PBS+x)=0 THEN  LET
x=MOB: GO TO 128
 124 RANDOMIZE USR ss: PRINT TAB
 3; PAPER 1; INK 6;"A"; INK 7;"
";o$(PEEK (PBS+x)); INK 6;"G": L
ET he=he+1
 126 NEXT x
 128 IF he=0 THEN  PRINT TAB 3;
PAPER 1; INK 6;"A"; INK 7;" Noth
ing at all.         "; INK 6;"G"
 129 PRINT TAB 3; PAPER 1;"CBBBB
BBBBBBBBBBBBBBBBBBBBF": POKE 6445
3,PEEK 23689-1
 195 RANDOMIZE USR ss: PRINT  IN
K 4;"What next?": BEEP .1,20
 196 INK 6
 200 RANDOMIZE USR 64459: PRINT
 202 LET vb=PEEK 64114
 204 LET no=PEEK 64115
 206 REM ANY SPECIALS?
 208 IF PEEK f=11 AND PEEK (o+9)
<>99 AND (vb<>0 AND vb<>12 AND v
b<>13 AND vb<>14 AND vb<>6 AND v
b<>5 AND vb<>7 AND vb<>8) THEN
LET r$(1)="You really need some
light here!": GO TO 50
 228 IF vb=200 OR no=201 THEN  G
O TO 45
  235 GO TO 1000+vb*100
1002 LET no=no-MOB: POKE 64115,n
o
1005 IF ((PEEK f=8 AND no=3) OR
(PEEK f=9 AND no=4)) AND PEEK (f
+4)=0 THEN  LET r$(1)="The DOOR
is closed!": GO TO 50
1010 IF ((PEEK f=14 AND no=3) OR
 (PEEK f=15 AND no=4)) AND PEEK
(f+7)=0 THEN  LET r$(1)="The GAT
E is closed!": GO TO 50
1090 RANDOMIZE USR 65005
1092 IF PEEK 64115=0 THEN  LET r
$(1)="You can't go that way.": G
O TO 50
1093 POKE f,PEEK 64115
1094 GO TO 100
1800 LET r$(1)="Next month": GO
TO 50
1900 IF (PEEK f=8 OR PEEK f=9) A
ND no=16 AND PEEK (f+4)=0 THEN
POKE (f+4),1: LET r$(1)="OK.....
.DOOR now open.": GO TO 50
1905 IF (PEEK f=14 OR PEEK f=15)
 AND no=21 AND PEEK (f+7)=0 THEN
  POKE (f+7),1: LET r$(1)="OK...
...GATE now open.": GO TO 50
1910 IF (((PEEK f=8 OR PEEK f=9)
 AND PEEK (f+4)=1 AND no=16) OR
(((PEEK f=14 OR PEEK f=15) AND P
EEK (f+7)=1) AND no=21)) THEN  L
ET r$(1)="It's already OPEN!": G
O TO 50
3315 LET r$(1)="Next month": GO
TO 50
7010 PRINT t$
7011 PRINT "AYou are in a very t
idy BARN.  GAThe farmer who runs
 this farm GAis obviously very p
roud of hisGAwork. Or is he?
            G"
7012 PRINT b$
7019 RETURN
7020 PRINT t$
7021 PRINT "AHaving climbed the
ladder you GAare now in what can
 best be   GAdescribed as an ope
n LOFT. It GAis more like a larg
e shelf    GAacross one end of t
he STABLE  G"
7022 PRINT b$
7029 RETURN
7030 PRINT t$
7031 PRINT "AYou are now in the
YARD of theGAfarm. There are no
animals    GAhere at the moment.
 North and GAsouth paths lead to
 a BARN andGAa FIELD, respective
ly.        G"
7032 PRINT b$
7039 RETURN
7040 PRINT t$
7041 PRINT "AThis is the cosy LI
VING ROOM  GAof the farm house.
In here youGAhave a strong feeli
ng of beingGAwatched by an unsee
n observer.G"
7042 PRINT b$
7049 RETURN
7050 PRINT t$
7051 PRINT "AThis DINING ROOM sh
ows no signGAof recent use. Perh
aps no one GAhas lived here rece
ntly. Is   GAthis a good omen fo
r you ???  G"
7052 PRINT b$
7059 RETURN
7060 PRINT t$
7061 PRINT "AThe STABLE is rathe
r bare and GAdoes not even have
the very   GAdistinctive odour o
f a horse. GAA ladder leads up t
o a LOFT   GAwhile a flight of S
TAIRS leadsGAdown into the darkn
ess.       G"
7062 PRINT b$
7069 RETURN
7070 IF PEEK (f+5)=1 AND vb=0 TH
EN  PRINT AT 10,16; FLASH 1;"*":
 GO SUB 8000: CLS : PRINT AT 2,1
;"You have just fallen into the"
;AT 3,1;"HOLE which YOU dug, and
 broken";AT 4,12;"your leg.": BE
EP 1.2,20: PAUSE 100: BEEP 0.5,1
5: GO TO 1602
7071 PRINT t$
7072 PRINT "AYou are in an open
FIELD with GAEXITS in all direct
ions. It   GAhas been turned ove
r in the   GAlast few days but n
o planting GAhas taken place.
           G"
7073 PRINT b$
7079 RETURN
7080 IF PEEK (f+4)=1 AND no=3 TH
EN  POKE f,9: GO TO 7090
7081 IF PEEK (f+4)=1 AND no=4 TH
EN  POKE f,7: GO TO 7070
7082 PRINT t$
7083 PRINT " You are at the DOO
R to the        farm house. It i
s rather          sturdy in cons
truction- almost  as if the ow
ners had some-      thing to h
ide.                   "
7084 PRINT b$
7089 RETURN
7090 PRINT t$
7091 PRINT " This is the FRONT
HALL with a   small inviting-l
ooking CUP-     BOARD in the c
orner. The          KITCHEN is t
o the east, while   NORTH lead
s to the LIVING ROOM "
7092 PRINT b$
7099 RETURN
7100 PRINT t$
7101 PRINT " The KITCHEN is all
 white and     sparkling. It ha
s the distinct  odour of disin
fectant.            "
7102 PRINT b$
7109 RETURN
7110 IF PEEK (o+9)<>99 THEN  PRI
NT TAB 5; PAPER 7; INK 0;" IT IS
 DARK IN HERE ": RETURN
7111 PRINT t$
7112 PRINT " Unlike most CELLAR
S, this one    has not become a
 store for all  kinds of rubbi
sh. However in     one corner t
here is a large      old-fashio
ned SAFE with a         small br
onze LOCK.                "
7113 PRINT b$
7119 RETURN
7120 PRINT t$
7121 PRINT " This is a DEAD END
.There was     no point in comi
ng here at all "
7122 PRINT b$
7129 RETURN
7130 PRINT t$
7131 PRINT " This is a narrow e
ast/west       road but there i
s also an exit  to the NORTH.
                    "
7132 PRINT b$
7139 RETURN
7140 IF PEEK (f+7)=1 AND no=3 TH
EN  POKE f,15: GO TO 7150
7141 IF PEEK (f+7)=1 AND no=4 TH
EN  POKE f,13: GO TO 7130
7142 PRINT t$
7143 PRINT " This GATE is at th
e end of the  east/west road a
nd leads into   the GARDEN of
the farm house.  "
7144 PRINT b$
7149 RETURN
7150 IF PEEK (f+6)=1 AND vb=0 TH
EN  PRINT AT 10,16; FLASH 1;"*":
 GO SUB 8000: CLS : PRINT AT 2,1
;"You have just fallen into the"
;AT 3,1;"HOLE which YOU dug, and
 broken";AT 4,12;"your leg.": BE
EP 1.2,20: PAUSE 100: BEEP 0.5,1
5: GO TO 1602
7151 PRINT t$
7152 PRINT " This is the very p
lain GARDEN   which consists o
f mainly lawn   and flower bed
s. It is quite    attractive e
xcept for a dis-    coloured p
atch of lawn near     the GATE
, which leads to west. "
7153 PRINT b$
7159 RETURN
8000 FOR x=-5 TO 15
8002 BEEP .02,x: NEXT x
8004 FOR x=14 TO -5 STEP -1
8006 BEEP .02,x: NEXT x
8008 RETURN
9940 PRINT AT 10,0;""
9949 CLS : PRINT AT 8,8;"Stop th
e tape": STOP
9950 LOAD ""CODE
9955 LOAD "OBJECTS" DATA o$()
9956 LET f=64280: LET o=64379: L
ET ss=64440
9957 LET MAX=PEEK 64118: LET MOB
=PEEK 64119
9958 LET PBS=245*PEEK 64123+PEEK
 64122
9959 LET SAVE=256*PEEK 64117+PEE
K 64116: LET LEN=256*PEEK 64121+
PEEK 64120
9960 LET DMOV=256*PEEK 64125+PEE
K 64124
9961 POKE 64130,0
9965 DIM r$(4,32)
9970 FOR x=1 TO 4: LET r$(x,1)="
*": NEXT x
9975 BORDER 0: PAPER 0: INK 6: B
RIGHT 1: CLS
9976 PRINT AT 8,8;"READY SOON...
."
9980 RANDOMIZE USR 65058
9984 RESTORE 9987
9985 FOR x=USR "a" TO USR "a"+63
9986 READ z: POKE x,z: BEEP .005
,20: NEXT x
9987 DATA 128,128,128,128,128,12
8,128,128,0,0,0,0,0,0,0,255,128,
128,128,128,128,128,128,255,255,
128,128,128,128,128,128,128,255,
1,1,1,1,1,1,1,1,1,1,1,1,1,1,255,
1,1,1,1,1,1,1,1,255,0,0,0,0,0,0,
0
9988>LET t$="DHHHHHHHHHHHHHHHHH
HHHHHHHHHHHHE":LET b$="CBBBBBBBB
BBBBBBBBBBBBBBBBBBBBBBF"
9989 GO TO 100
9990 SAVE "ADVENTURE" LINE 9940
9991 STOP
9992 BORDER 1: PAPER 1: INK 7: B
RIGHT 0: CLS
9993 PRINT  BRIGHT 1;AT 8,0;"Now
 REWIND tape for VERIFICATION"
9994 PAUSE 200: PRINT  BRIGHT 1;
AT 15,2;"Press any KEY when read
y."
9995 BEEP 1,10: PAUSE 0
9996 VERIFY "ADVENTURE"
9997 VERIFY "SYSTEM"CODE SAVE,LE
N
```

Next month

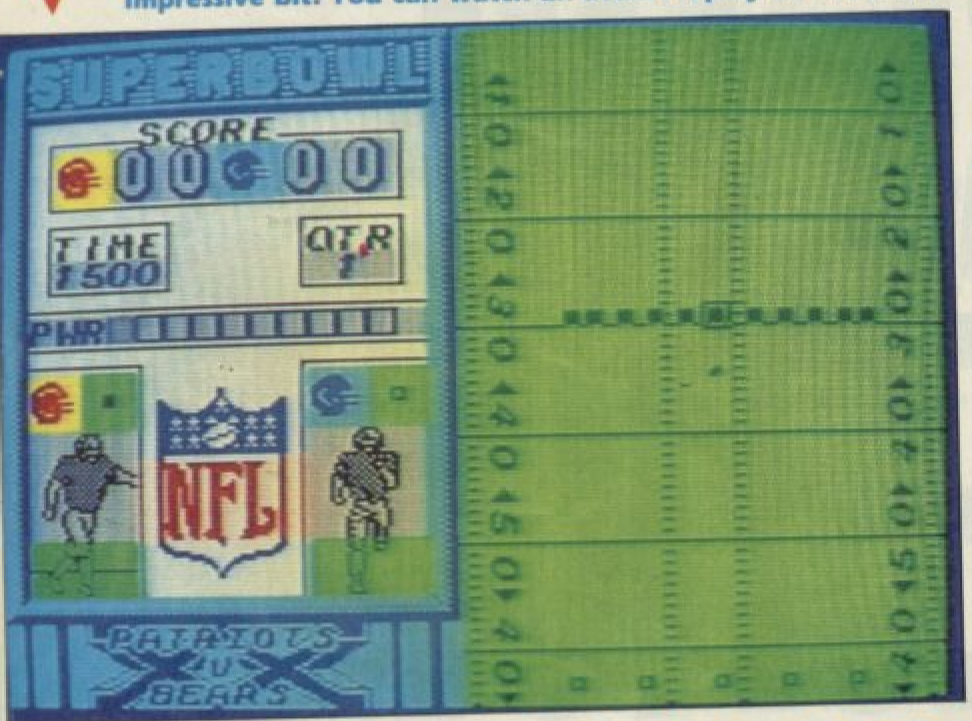
The remainder of the demonstration adventure will appear in next month's issue.

Also in the July issue we will be offering a number of special prizes for the best adventures written using the **ABS**.

SUPER BOWL

At last! Four months after the Super Bowl when the Chicago Bears slammed the fridge door on the New England Patriots (you can't really blame them for capitulating) Ocean has released Super Bowl **— a strategic American Football simulation, the first to be officially approved by the NFL.**

Super Bowl **plays strictly according to the NFL rules and the instructions are detailed and complex. The screen is divided into two, one half comprising a number of menus allowing you to select your moves, attacks and defences, the other half being the playing areas. The field scrolls up and down and the two teams are depicted as a series of dots. Make your choice, press a button and the dots move accordingly. Then comes the impressive bit. You can watch an action replay on the menu**



screen — here the figures look like huge Fridges and the effect is realistic.

For fans of the sport, there is also an accompanying audio tape which describes in detail the weird terminology (what's a Snap or Punt?) and gives hints on strategy. Super Bowl **is out now for £9.95.**

PRICE OF MAGIK

Some good news for adventure fans. There's an awful lot of misspelt magic around at the moment, and Level 9 is obviously determined not to be left out. **The Price of Magik** is all about the funny goings-on at The House of the Red Moon. Get ready for combat and try to defeat Myglar, the evil sorcerer, before he sucks all the power from the red moon. The only way to rid the land of his dreaded shadow is to fight his magic with magic. And casting spells is the name of the game — but watch your sanity, it declines as you grow in magical stature! For both the 48K and 128K, at £9.95 it's due out now.





TERRORS AND TOADS

The next few weeks sees a couple of new launches from Ariolasoft — **Terrors of Trantoss,** an adventure, and **Toad Runner,** an arcade game.

Both are due for release in early June for £7.95 and, at present, run only on the 48K.

Terrors of Trantoss casts you into a dark and gloomy area south of the Mountains of Mortran to a village full of terror. There the villagers are slowly disappearing. And you've got to sort it all out.

Toad Runner is a different matter altogether. Far from being the hero of the piece you've been cast as . . . yup, a toad. Actually, you're really a prince but someone's put a curse on you which can't be lifted until you've destroyed Stoneheart and rescued the princess. The story line sounds horribly familiar to me.

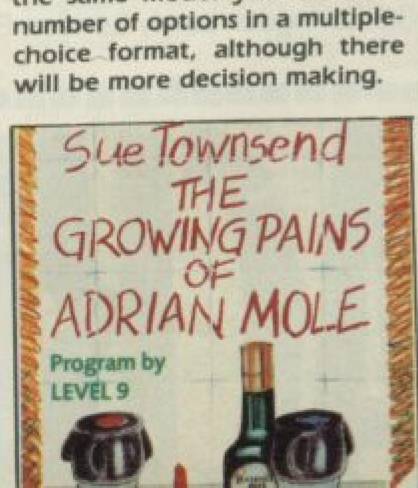
Even so, the idea of being a toad appeals.



MORE MOLE

Following on from the somewhat spotty and traumatic life of Adrian Mole at the tender age of 13¾, Mosiac is to introduce **The Growing Pains of Adrian Mole**, due in late summer for £9.95.

Like the first **'Mole', Growing Pains** is being written by Level 9 and it will follow the style of the first title. Play is in the same mode: you choose a number of options in a multiple-choice format, although there will be more decision making.

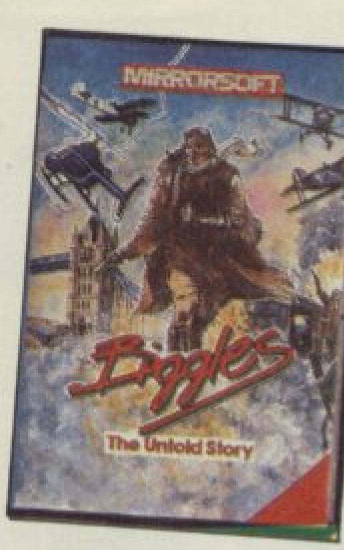


NEXUS

At last you've got a break to test your powers as an investigative journalist — sent to South America by your editor to collect enough information to crack a huge drugs ring. Who are the ringleaders? What transportation do they use? Which politicians are involved? You're not without help — Nexus, a gang of five, working secretly within the complex aid and abet you. Each of the gang has a special skill, one with machine guns, another is an expert forger etc. Take care though, if you make too many blunders and endanger Nexus, they'll kill you. Nexus will be in the shops early next month running on both the 48K and 128K Spectrums, price £9.95.

SOFT PREVIEW

Software Preview compiled by Clare Edgeley



MIRRORSOFT'S LATEST

Three games are due for imminent release by Mirrorsoft.

Biggles has been eagerly awaited for some months and now it's due for release in the next few weeks at £9.95. The plot closely follows the movie of the same name, and those who haven't seen the film will need to know that Biggles has a time twin who keeps falling through a hole in time to help the flying ace whenever he's in a tight spot.

So you may be piloting a biplane one minute, and the next a helicopter, or being chased across London's rooftops by the SAS and then dodging your way through WWI enemy trenches. The idea is to help Biggles destroy the Germans' secret weapon on the Western Front and rescue your comrades who're taking refuge in a convent inside enemy lines. Like the film, it comes as a surprise each time you're thrown into a different time zone and in the game, each screen needs different skills to come out on top. So, on your way, chaps, and the best of British.

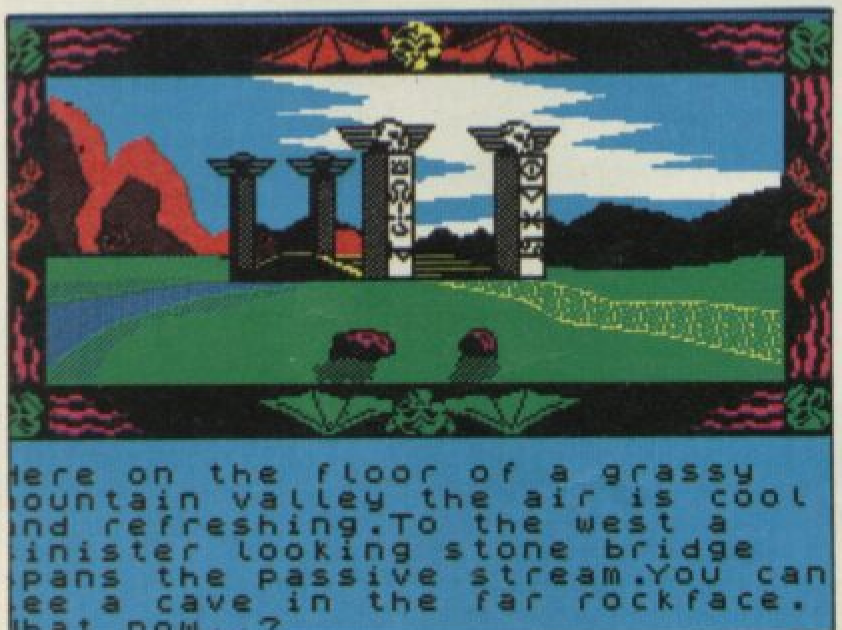
Dynamite Dan and his adventures with Dr Blitzen was released in January by Mirrorsoft. Now **Dynamite Dan II,** the sequel, is nearing completion. Out in the next few weeks at £7.95.



This is your chance to continue the fight against the evil Dr Blitzen who's corrupting the minds of teenagers through seemingly innocent pop records — each record has been tampered with and broadcasts mind-destroying sound waves. There are eight master disks and eight juke boxes in different locations. Find the disk, insert it into the right jukebox and use the information it gives to piece together the secret password of theDoctor's record pressing plant. Watch out for the nasties, solve the puzzles and you'll have saved the world's youth.



Action Relfex is the third release and should be due at the end of this month for £7.95. The idea is to guide or steer a ball round an obstacle course. That sounds easy, but watch out for vacuum tubes which will hoover you up. Pits, a crushing machine, and a grid with gaping holes for you to fall through are just a few more of the obstacles. Some objects may help you and you'll find them through trial and error. There's a time limit on each screen, and you'll have to be very nifty indeed to make it to the 100th and final screen.



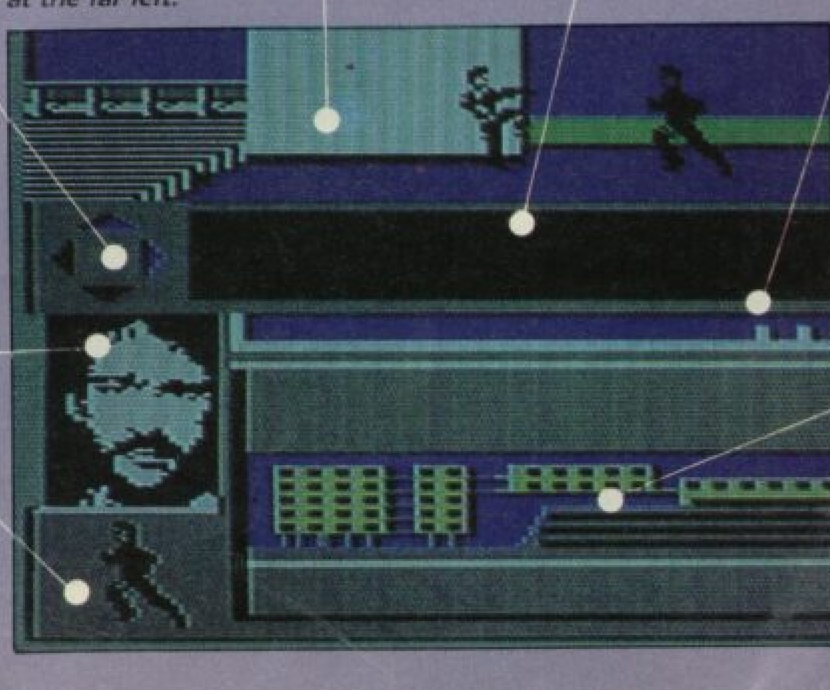
ADVENTURE CREATOR

Incentive is lauching Graphic Adventure Creator, a direct competitor to Gilsoft's Quill, Illustrator and Patch.

It's a complete do-it-yourself adventure kit allowing you to produce beautifully-illustrated games. It's due to be released in the next couple of weeks, it's 128K compatible and costs £22.95 — a very competitive price.

With the one package you can create text-based graphic adventures. You don't need to load the Adventure Greator to run the game you've just created and its many features include multiple command lines, and a text compression facility which recognises each word — eg should the word 'mountain' be used three or four times, that word would be stored only once in memory. Incentive's Ian Andrews reckons that means you can get in 50 per cent more adventure.

The graphic editor includes line, dot, rectangle, circle and ellipse creation and you can use up to ten colours per picture.



CURSOR arrows flash to indicate the direction you must travel in order to meet another character. They are your pathfinders.

THE main action area where game play takes place. It scrolls north, south, east and west showing one floor or level at a time. The background scenery is at the far left.

THE text area. Nexus members will introduce themselves and speak to you, or you may overhear conversations which will help crack the drugs ring.

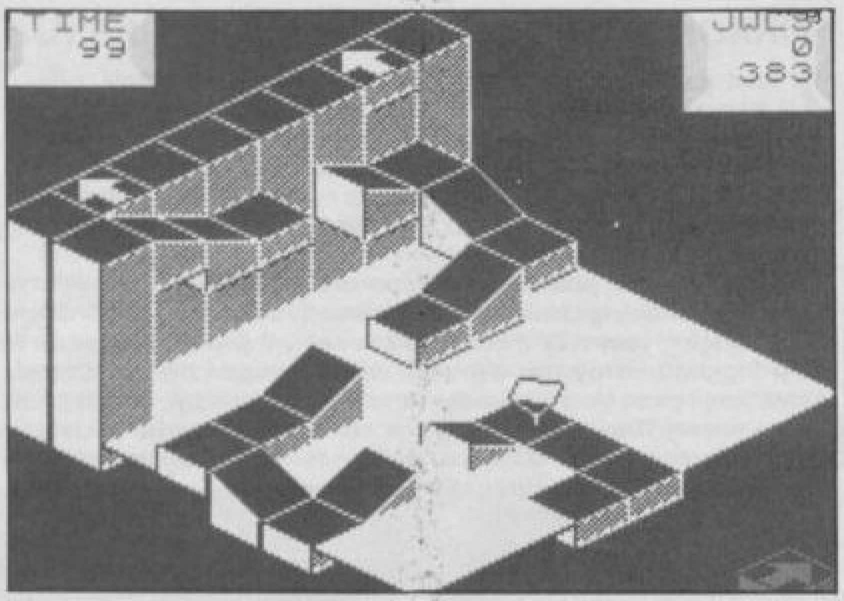
THE blocks on the long range finder show either that there are two lift doors if you continue moving right or, if they flash, you can expect to see someone moving towards you.

FACES of any characters you meet in the action area are pictured here. You'll recognise the Nexus members so any strangers have to belong to the 'Organisation' and are therefore potentially dangerous.

FOUR buildings of the complex are shown in this long range map. Note the layout of the buildings and the number of levels to explore. Press the fire button and this instruction area may change into a practice area where you can learn to use the weapons.

Press again and a character may appear — you can now preview the moves you're able to make, walk, jump, roll etc. Also you can choose a move before you need to make it and have it ready for action.

THE character whose face is pictured is running — so look out for him in the action area.



GOING SPINDIZZY

▲

Spinning tops and grid-like slopes are all the rage. The ideas are mostly filched from Atari's marvellous arcade game, **Marble Madness.**

Melbourne House first cottoned on to the idea with **Gyroscope**, Hewson quickly followed with **Quazatron**. Now here's another rapidly revolving title, **Spindizzy** from Electric Dreams.

Still using the basic idea of guiding a spinning top over ledges and up and down slopes, **Spindizzy** is set on separate screens, and not on one huge playing area which scrolls in all directions. You play the game in sections, with one whole section shown on each screen. There are problems to solve, jewels to collect are often in inaccessible spots and you'll have to work out how to get them. The jewels are the energy which guides your craft and are vital if you want to explore each screen. Fast and full of colour with lots of puzzles, **Spindizzy** could get you in a whirl. It's in the shops now at £9.99.

SERIOUS

In an attempt to drag Assembler/Disassemblers kicking and screaming into the eighties, Ocean is releasing Spectrum 48K and 128K Laser Genius **in May.** Laser Genius **is intended as a rethink of what such programs should do, providing a number of unique features.**

It uses a hybrid screen and line editor — the cursor can move freely but the code is also divided into numbered blocks that can be deleted, moved etc. Source code can be loaded from other assemblers such as Devpac **but it is then tokenised to make it more compact and to allow very fast assembly.**

Genius **also provides a small compiling language called Phoenix that can be freely mixed with the standard Z80 mnemonics.**

The dissassembler can add labels and produce a file that can be reloaded into the assembler for editing.

As well as single stepping the monitor provides slow running modes so the stack and registers can be studied. There are also programmable break-points that are triggered if certain conditions are met, eg, if specified locations are read or if rubbish appears on the screen. Using this you can trap bugs and have a trace of the problem.

All this and quite a lot else besides for just £14.95.



FOOTBALL

If you're a football freak, then you'll probably be watching the World Cup at the end of this month. However, just in case things don't go well for your team, you can always replay the match and try to change the score.

Just play US Gold's **World Cup Carnival**. Kit your team out in the right colours, choose the opposing team's country and the whistle blows — you're off. The screen scrolls as you charge down the pitch, dribbling and kicking the ball to your team mates. Corners and throw-ins are all part of the match, until finally, you score. The crowd roars. There's also a two-player option.

With the game you also get an A2-size poster on which you can record the scores during the world cup as they are played.

World Cup Carnival is out now for £9.95 on the 48K Spectrum and there are plans to put it on the 128K later.

SOFT PREVIEW

DARK SCEPTRE

After **Doomdark's Revenge,** another mega-game from Mike Singleton and Beyond is about to hit the streets. **Dark Sceptre** will be available in July for £9.95.

The Dark Sceptre is an artefact which is much sought after, especially by the Shadow Lords who have gained great influence over the Isles of the Western Sea. Gain control over the Sceptre and you weaken the powers of the Shadow Lords. Should one of them lay their hands on it, he will grow in evil, wreaking havoc.

The graphics look tremendous, no attribute problems, beautifully illustrated and smoothly animated.

Also there are plans in the pipeline which will enable you to send in your cassette, have it up-graded to microdrive, and you would then be able to play the game by mail with other players. No firm details as yet, but more news next month.

MADNESS

Hot on the heels of **Sport of Kings** — reviewed on Page 68 — come two more 48K games in Mastertronic's MAD range. Look out for them in mid-June at £2.99 each.

The **Golden Talisman's** labyirinthine plot involves a maze: collect all five pieces of the broken and scattered talisman. Defeat the dragons, collect objects and cast spells. Sounds like pretty standard stuff, but the price is good.

Master of Magic sounds more interesting. It's a role-playing adventure and at first looks a little like **Swords and Sorcery.** However, play and the use of windows is different. It is Thelric, Master of Magic, who drags you into the game. To win your freedom you must first find for him the Amulet of Immortality. . . Could be worth a look.



ROBOTS IN TUJAD

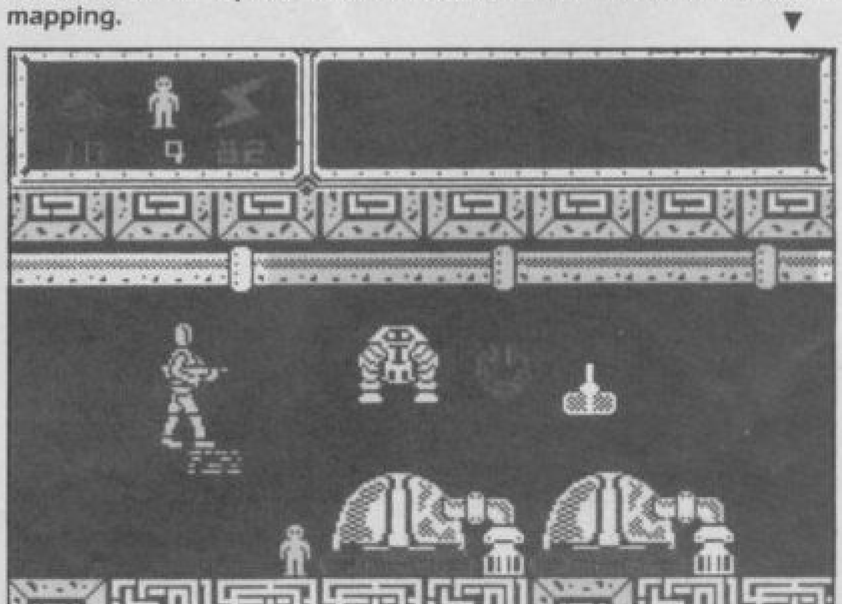
Robot fights robot is the theme of **Tujad**, Orpheus' latest game which follows in the rather murky footsteps of **The Young Ones.** It will run on both the 48K and 128K Spectrums and will be in the shops next month for £8.95.

Tujad is a maze-game played along the by now familiar lines of zap the aliens, or anything else that moves, and explore 300 odd screens to piece together and rebuild Tujad's faulty Sub-processor Element.

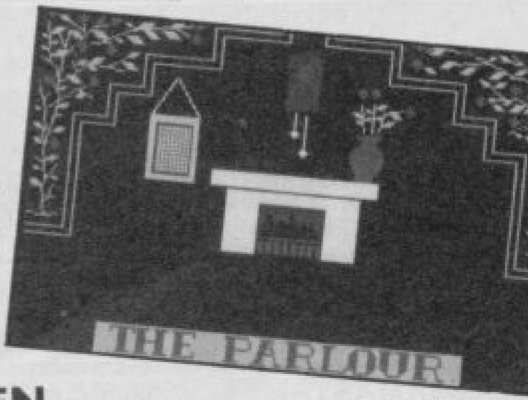
A surprise then that **Tujad** has a number of original ideas. Each time you come across a section from a printed-circuit you're transported to another screen where you must fit that section into the right position — rather like a jigsaw puzzle. In that way you rebuild the faulty element.

Aliens must be dealt with but you'll need to be carrying the right weapon. Extra lives can be found and are chalked up at the top left-hand corner of the screen as is extra energy. The large window running across the top is for messages which flash up to tell you what is happening or how you are doing. Teleport units are hidden round the maze and can be used to great effect to escape from sticky situations or to explore further into the maze. It should take some mapping.

▼



SOFT PREVIEW



SNOW SEEN

Remember the fairy tales you used to read? The one about the **Snow Queen** — how cold and hard was her heart, how it was forever winter because spring didn't dare show its face.

Well, Mosaic is releasing an adventure based on the Hans Christian Andersen fairy tale with an explanation of the story if you happened to miss out. So help Gerda find her best friend (who's been snatched by the Snow Queen) and bring back some warmth into his poor, frozen, heart.

It's a graphic adventure developed with Gilsoft's **Quill** and **Illustrator**, and the text screens alternate with the illustrated screens. To be launched at the end of this month, **The Snow Queen** will cost £9.95.

ADVANCED ART STUDIO

The follow up to OCP's Classic **Art Studio** — reviewed October issue — is the **Advanced Art Studio** on the 128K to be released via Rainbird at the end of July, on cassette, for £24.95.

As well as the features contained in the original **Art Studio**, the **Advanced** version will be controlled with icons as well as windows and pull-down menus. It can churn out five sizes of dot-matrix printer dump, has a grey-scale facility and also supports 17 Centronics and RS232 Interfaces. For drawing it has 16 pen styles as well as eight random sprays and 16 user-definable brushes.

There are three levels of magnification and, when using the *Fill* feature, there are 32 user-definable patterns. You can produce up to nine character sizes and, as well as being able to draw lines, rectangles, triangles and circles, you can now draw rays.

There's masses here for all budding Leonardos to play around with.



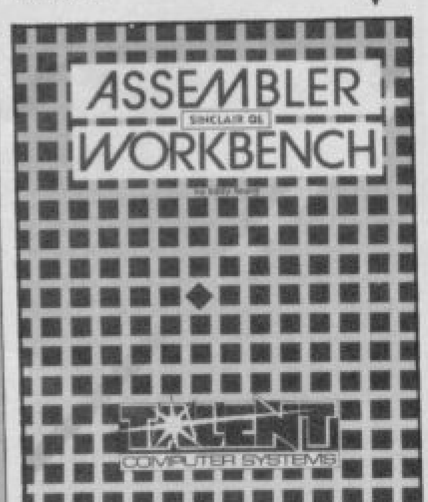
WORKBENCH

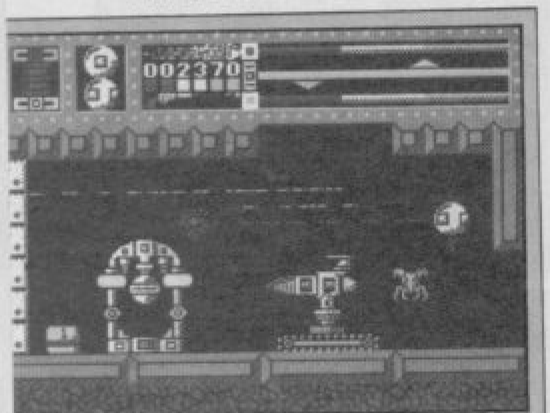
Good news for QL owners. Talent has released **Assembler Workbench** and it's already in the shops for £24.95.

There are three main program modules — a full screen editor, an assembler and monitor and disassembler.

The editor operates on Ram and disc files and with it your programs can be edited, assembled, executed and debugged in memory with no Microdrive access. It's also suitable for programs in languages other than Basic.

The assembler can operate in conventional two-pass mode or as a one-line assembler, and the monitor has a useful dual-screen facility to assist you when debugging graphics programs. More news in QLink next month.





EQUINOX

In yet another departure from the Wallys, Mikro-Gen is releasing Equinox — a tale of aliens, level passes and radio-active cannisters.

You've been cast as a droid with a mission to dispose of the eight cannisters — using various tools — and make the area fit for human habitation. That means using your initiative.

Judging from the tips sheet we have received, there is an awful lot of toing and froing — in short — Equinox looks like a typically frustrating Mikro-Gen game. There are teleporter terminals, trans-level teleporters, credit dispensers and disposal chutes to work out before you can even begin to get anywhere. Sounds fun and it should be out soon for the 48K and 128K, price £9.95.

And later on in the year Mikro-Gen introduces Ricky Steel, teenage superhero.

It's a straightforward arcade game boasting 'the fastest and smoothest two-directional replacement inertia scrolling' according to the press release hype. Ignoring that completely, you and your super car, Nightwind, must defeat the evil Doctor Vardos. That means whizzing around firing double-barrelled anti-matter plasma bolts in 16 different directions.

More news on Ricky next month.

RON AND MAGGIE

Ronald Reagan's in bits and Maggie Thatcher's gone to pieces. And only you can put them back together again in Domark's new release — **Splitting Images.**

It's not what you think either, and Domark is quick to point out that the game has absolutely nothing to do with the popular TV program *Spitting Image*. Presumably they couldn't get the licence.

Sp(l)itting Images is based on those hand puzzles where a picture or a set of numbers is jumbled up, and one square at a time you've got to push them around until they are in the right position. DK'Tronics released a very similar game about 20 years ago and it didn't sell particularly well.

And if you have any doubts about the dynamic duo, Maggie and Ron, there are a further ten characters to unscramble. You could even have Prince Andrew and Sarah Ferguson on your TV, Neil Kinnock or Marilyn Monroe. Or what about Alan Sugar and Sir Clive? Then there's Mick Jagger, the Prince and Princess of Wales and Humphrey



Bogart. There must be someone there you'd like to tangle with.

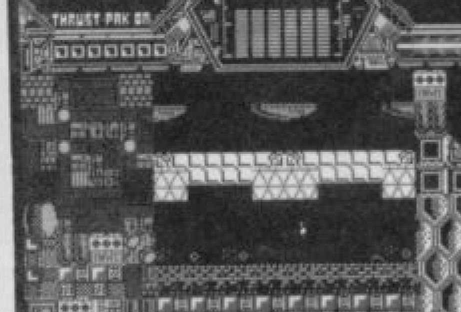
Splitting Images should be in the shops now for £7.95 and runs on both the 48K and 128K Spectrums.

TANTALUS

Be a reactionary. Be a Punkoid. Quicksilva's **Tantalus** is a maze game all about the assassintation of the last deviant human being in the Universe.

You have four Punkoids to control and, as the deviant has left many traps throughout the maze, take care not to waste your lives. To get to him, and he is cunning, you're going to have to explore the highly coloured labyrinth or corridors — resembling a patchwork quilt — open 32 deadly doors by hitting the lock activators dead centre, and use your six weapons systems with caution. There are the usual bunch of aliens to avoid — 48 types in all and air-locks to pass through. Beware of making contact with moving and stationary objects, they are almost certain to drain your power supply. Your spiky Punkoid is really cute — a mohican hairstyle on a large head supported by two feet.

Tantalus is compatible with the 128K and will be out by the end of this month for £8.95.



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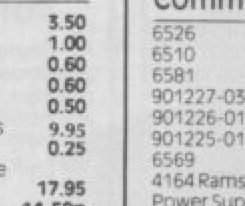
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Next month's Sinclair User



July? You've got to be kidding. That's a whole month away yet.

So what's happening?

No idea, can't even begin to think about it yet.

Don't believe you.

Well, five of the country's top programmers will take the specification for the secret 'Loki' SuperSpectrum and explain what they could do with it – and that will be quite a lot.

And music. There are so many music packages around now it's confusing – we'll round them up and find the winners. That should set the tone for the magazine.

Then there're the reviews. Always difficult to predict – a lot can happen in the next four weeks.

With the World Cup in full swing we'll have rather a sporting feel. Both World Cup Carnival and Super Bowl – it all depends on whether you prefer the round ball or the funny shaped one. There'll be Spindizzy – more in the Marble Madness vein. Might even take a shot at Biggles. And mustn't forget The Price of Magik.

The price of magic. Just 98p – July Sinclair User.
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Gremlin

SO IT'S GOODBYE to Slugger and hello Lord Saccharin, as we shall soon have to call Alan Sugar.

It must have been galling for old Clive to hear his computers compared to suntan lotion at the press conference, but worse still to hear his reliability record described as 'appalling'. Isn't the main feature of Amstrad hi-fi those flashy chrome knobs that fall off two minutes after you've got it back home?

Flying high

Anyway, all the papers are saying the combination of 'what Clive does best' and 'Amstrad marketing' is a winner. Quite how one makes a fortune out of entertaining young women in a large cardboard box escapes Gremlin, but never mind.

The glory of Amstrad marketing has already been revealed in the announcement of a Spectrum 128 with built-in cassette deck for the Autumn. This stroke of genius will ensure nobody buys a 128 before then. Nice one, Alan.

But what made Gremlin's day was the earnest young cub at the press conference who asked Slugger 'if it was true that he was thinking of launching a personal aircraft'.

Sinclair receptionist Yolande Yates, whose voice sends shivers down Gremlin's deformed spine, has been deluged with calls about the microlite plane (*Sinclair User*, April). There's as much truth in it as the idea that Clive won't launch another computer as soon as he can find a few fivers . . .

Tony awards

Talking of fivers, the response to last month's grubby fiver offer demonstrates just how obscure Alligata really was in those halcyon Crowther days Stephen Smith hedges his bets with a choice of two, and Grant Boxall reckons he's found the first Alligata game, which is not the same as the first Tony Crowther/Alligata game. Or is it?

Grant also says he loves Gremlin. Please keep our personal relationship out of it, Grant. Yolande might get jealous.



Tony's invisible curls

Since those are the only entries so far, Gremlin reckons it's best to wait and announce the winner next month. Then we can print a photo of Tony's hairstyle and George Michael fans everywhere will swoon with delight . . .

Soft soap

A simple tale of country folk doesn't sound ideal material for an adventure game, but Mosaic has taken the plunge by signing up *The Archers*. Yes, Gremlin thought it was a joke at first too, but no.

Rumour has it that if *Enter Bull* — stop sniggering — *Buy Drink* and then *Give Drink to Walter* you die of boredom after 35 screens of incomprehensible rustic waffle.

Mosaic was also responsible for the *Diary of Adrian Mole*, a game so unexciting it even embarrassed its programmers, Level Nine. "It won the accolade of an appearance in Private Eye's *Great Bores of Today* says Mosaic, which is not something normal people want to crow about . . .

Dr Who in time warp

The latest crop of Scooby nominations yields up a title which seems to have slipped through the net until now. Douglas Main writes to suggest **TT Racer**, which he says was first advertised in October 1984 under the name **TT Grand Prix**. And how good it is to see someone other than Ocean winning the coveted prize. Digital Integration should be proud.

Of more immediate interest, though, is **Dr Who**. Micropower managed to produce some Commode screen shots for the occasion, but nothing more has been heard. Simon Gould therefore nominates the good doctor for his late arrival. Perhaps Michael Grade's thrown away the sonic screwdriver or something . . .

Strange bedfellows

Now Incorruptible Scolding, our erstwhile chief, is settling in nicely down in Cornwall, Gremlin was surprised to find his first visitors were a veritable embassy from Newsfield. It seems the old lawsuit hatchet is well and truly buried, with the boys from *Crash* asking Bill to edit *Amtix!* for a week or so, since its own editor has just left.

Incorruptible stuck to his principles, and took the money . . .

Narrow Skweek

Talking of principles, the great Prestel hacking trial has now established that hacking is in fact forgery. The law clearly doesn't like computers very much, and defendant Steve 'Skweeks' Gold had his laptop Tandy 100 confiscated at the courtroom door.

This didn't stop his barrister attempting to use copious print-outs from Micronet's news coverage of the trial as notes, however. Alas, his touching faith in the accuracy of Chris 'Lunchbreaks' Bourne's reports led him astray. Apart from awarding the prosecution a totally unmerited QC, Lunchbreaks also managed to include several non-existent 'admissions' in his tale, for which Skweeky's brief had to apologise when he adopted them in cross-examination . . .

Say what?

Brazen Backslapper of the Month Award goes to Melbourne House, for what must be the tersest press release ever.

All it has on it is the command "Say 'Kwah' ". John 'Disgusting' Gilbert, who always does this to words he can't understand, says Kwah is Hawk backwards. Gremlin is impressed, and has said Kwah a number of times quietly to himself, but nothing happens.

It's supposed to have something to do with Redhawk, but somehow Der Kwah doesn't have the same ring to it, does it . . .?

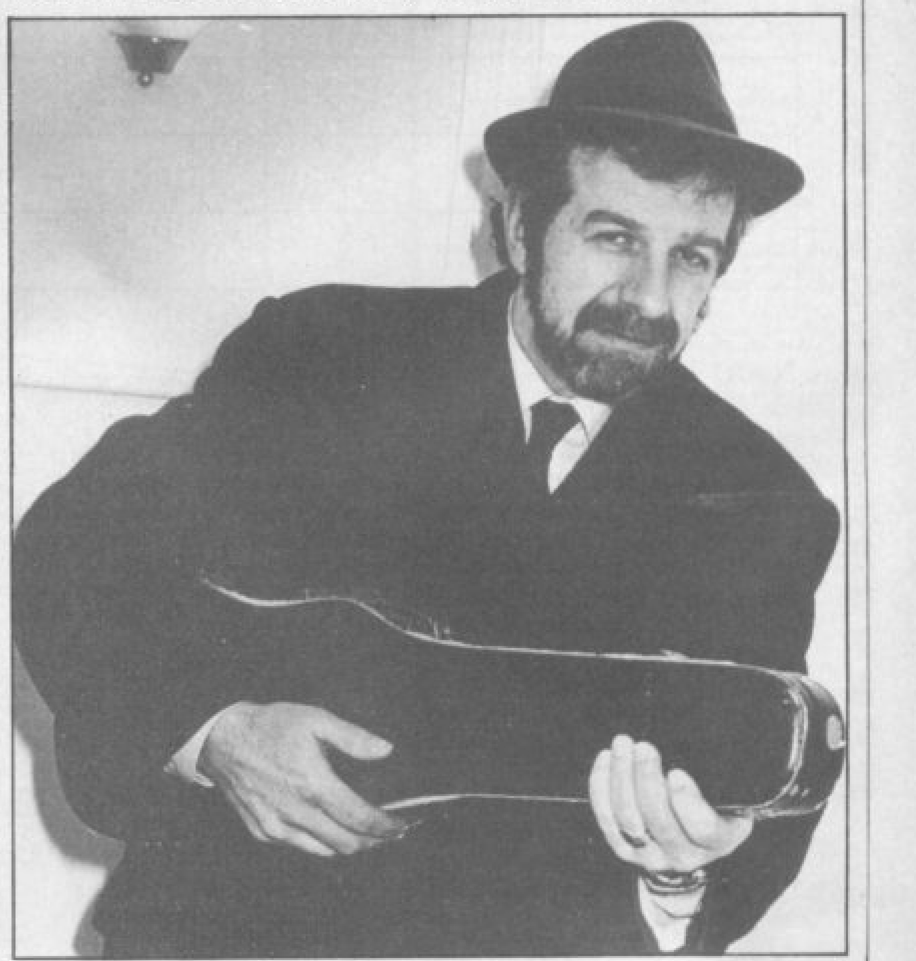
If at first you don't succeed

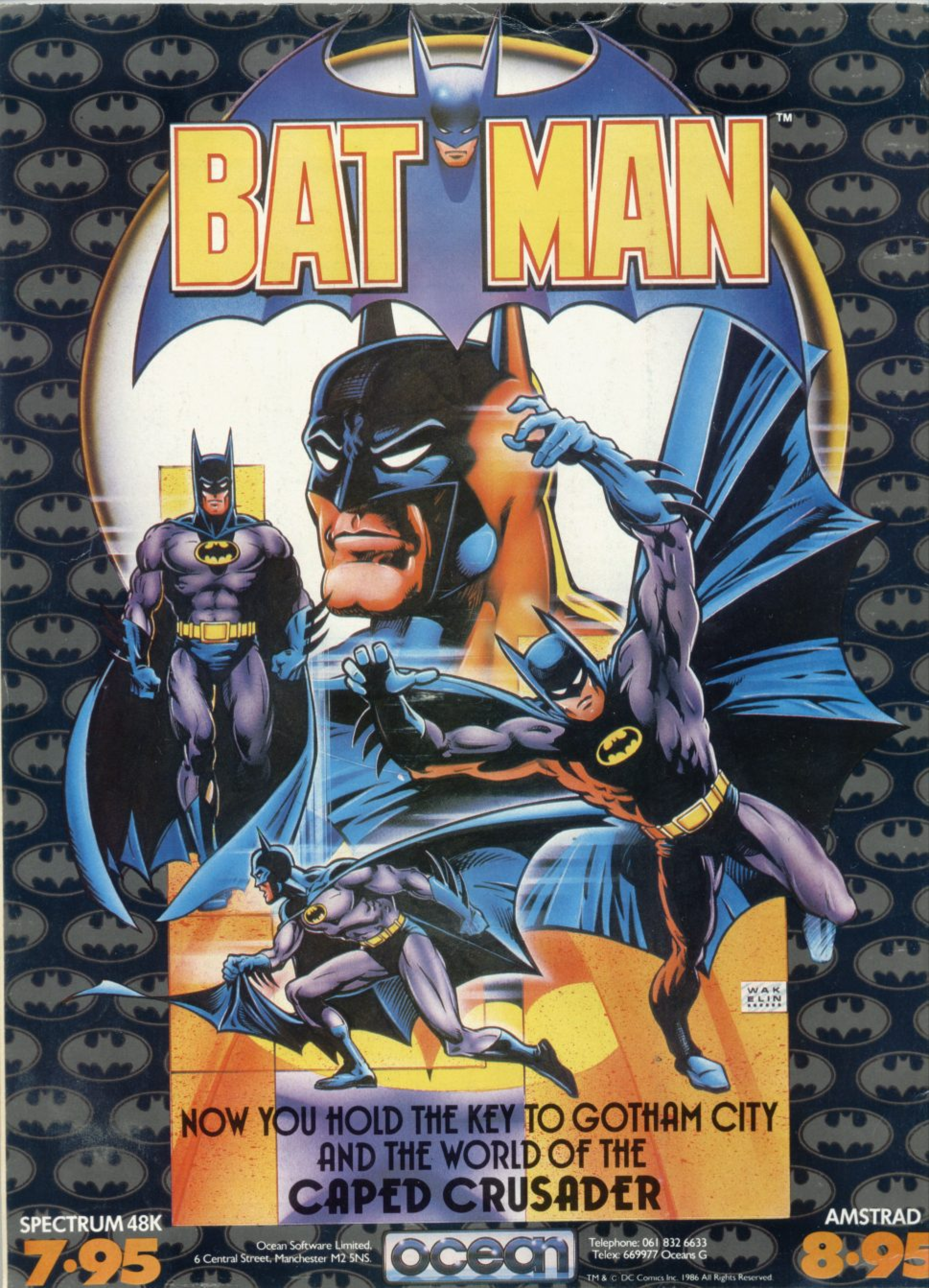
Finally, following last Summer's resounding success with **View to a Kill** (surely some mistake? ed) the revolting lads at Domark have bought up the rights to **Live and Let Die**. This was the one in which Jane Seymour became the human sacrifice at a voodoo ceremony but was rescued at the last minute, which Gremlin reckons rather spoiled the fun.

But to be fair, on present form we can expect rather more from Domark than before. More bugs, more flicker, more stick-like figures doing acrobtics . . .

Roger Moore would turn in his grave . . .

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